

# Ne

## European

**DISTRIBUTION STATEMENT A**

Approved for public release;  
Distribution Unlimited

DTIC QUALITY INSPECTED &




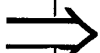


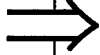


EUROPEAN  
GEOPHYSICAL  
SOCIETY

19980519 037

# NICE ACROPOLIS

Tel: +33-493-92 81 13

Fax: +33-493-92 81 14

<b>Level 3</b>		<b>AGORA 3</b> Poster Coffee Poster ST, PS & NP	 <b>LES MUSES</b> Coffee & Poster Coffee Rooms Clio, Thalie, Erato, Uranie, Calliope & Euterpe Poster OA & Video	 <b>TERRASSE</b>	<b>OA</b>
<b>Level 2</b>	<b>A P O L L O N</b>	 <b>AGORA 2</b> Exhibition Poster Coffee Poster G & HS Video	 <b>RHODES</b> Exhibition Coffee (2x), Poster Coffee & Lunch Internet Gallieni 1 Section/IWG Offices Slide Preview Slides & Co Rooms Studio & R6 Mykonos & Gallieni 2, 3 & 5 R5, R7 & R8 Hermes, Athéna, R1-R4 & R9-R11 Poster SE & NH, Video & PC	 <b>ATHÉNA</b>	<b>NH HS G SE</b>
<b>Level 1</b>		<b>AGORA 1</b> Registration, Business Center Message Boards Job Centre Editorial Office	 <b>MÉDITERRANÉE</b> Coffee Rooms M1-M4 M9 & IRIS M5-M8	 <b>IRIS</b>	
<b>Level 0</b>		Bank Wardrobes Payphones Council			<b>NP PS ST</b>

**EMERGENCY CALL**

**\* 8374**

**\* 8762**

**\* 8757**

## Schedule of Events

### Sunday, 19 April

15.00-20.00 Registration

### Monday, 20 April

08.00-18.00 Registration  
08.30-17.00 Oral Sessions  
10.00-11.30 Refreshments  
16.30-17.00 Refreshments  
17.00-18.15 Opening & Award Ceremony  
18.15-19.00 Society Lecture  
19.30-22.00 Icebreaker Reception

### Tuesday, 21 April

08.00-18.00 Registration

08.30-17.00

10.00-11.30

17.00-19.30

17.00-18.00

09.00-19.30

### Wednesday, 22 April

08.00-18.00

08.30-17.00

12.00-14.00

17.00-19.30

09.00-19.30

19.30-21.00

Oral Sessions

Refreshments

Poster/Video Sessions &

Refreshments

Society Lecture

Exhibition

Registration

Oral Sessions

Open Section/IWG

Luncheons

Poster/Video Sessions

& Refreshments

Exhibition

Conveners' Reception

### Thursday, 23 April

08.00-18.00

08.30-17.00

10.00-11.30

17.00-19.30

09.00-19.30

### Friday, 24 April

08.00-14.00

08.30-18.00

10.00-11.30

15.00-16.30

Registration

Oral Sessions

Refreshments

Poster/Video Sessions

& Refreshments

Exhibition

Registration

Oral Sessions

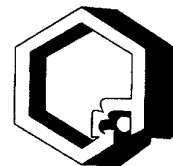
Refreshments

Refreshments

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE  1998	3. REPORT TYPE AND DATES COVERED  Conference Proceedings		
4. TITLE AND SUBTITLE  European Geophysical Society XXII General Assembly, 20 - 24 April 1998		5. FUNDING NUMBERS  F617089		
6. AUTHOR(S)  Conference Committee				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  Rutherford Appleton Laboratory Chilton, Didcot OX11 0QX United Kingdom		8. PERFORMING ORGANIZATION REPORT NUMBER  N/A		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)  EOARD PSC 802 BOX 14 FPO 09499-0200		10. SPONSORING/MONITORING AGENCY REPORT NUMBER  CSP 98-1044		
11. SUPPLEMENTARY NOTES  Four volumes of proceedings and one volume of newsletters.				
12a. DISTRIBUTION/AVAILABILITY STATEMENT  Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE  A	
13. ABSTRACT (Maximum 200 words)  The Final Proceedings for European Geophysical Society XXIII General Assembly, 20 April 1998 - 24 April 1998  This is an interdisciplinary conference. Topics include meteorology, ionospheric physics, space physics, oceanography, geophysics and geodesy				
14. SUBJECT TERMS  Space Science, Atmospheric Science, Ionosphere, Geophysics, Meteorology			15. NUMBER OF PAGES  1546	
			16. PRICE CODE N/A	
17. SECURITY CLASSIFICATION OF REPORT  UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE  UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT  UNCLASSIFIED	20. LIMITATION OF ABSTRACT  UL	



# European Geophysical Society XXIII General Assembly Nice, France 20 - 24 April 1998



## General Information

### Location and Conference Address

The 23rd General Assembly of the European Geophysical Society is held at the congress centre *Nice Acropolis*.

The congress address is:

Nice Acropolis  
1 Esplanade Kennedy  
B.P. 83  
F-06302 Nice Cedex 2  
France

Tel: +33-493-92 81 13  
Fax: +33-493-92 81 14

The official entrance is from *Bd. Risso*. Next bus stop is *Acropolis*, served by SUN buses Nos. 3, 4, 5, 6, 6A, 16, 16A & 16B.

The assembly is open to scientists of all nations.

### Official Language

The official language of the General Assembly is English. Simultaneous interpretation is not provided. It is therefore expected that authors are able to present their research more or less fluently in the English language.

### Registration Information

All attendees must register and wear their name badges throughout the meeting hours.

### Conference Office, Hotel Booking and Travel Services

The *Congress Counter* is located in the Entrance Hall of the Congress Centre (AGORA1). The opening hours are:

<i>Sunday, 19 April</i>	<i>15.00-20.00</i>
<i>Monday-Thursday, 20-23 April</i>	<i>08.00-18.00</i>
<i>Friday, 24 April</i>	<i>08.00-12.00</i>

Final, on-site and day registration, lost and found, messages and the EGS support awards are handled at this counter at any time during its opening hours, while on-site hotel booking and travel arrangements are handled at the separate counter *Hotel Booking* behind the Congress Counter.

### Members of Cooperating Societies

Members of the following societies may register at the EGS member rates:

- American Geophysical Union (AGU) (only for members with an address outside of Europe)
- Danish Geophysical Society (DGS)
- Norwegian Geophysical Society (NGS)
- Swedish Geophysical Society (SGS).

### Non-member Registrants

Participants who are registered at the full-meeting non-member or student non-member rate, are automatically recognized as EGS members for 1998 at no extra charge.

### Guest Registration

Guests or spouses attending only the Opening & Award Ceremony on Monday, 20 April, at 17.00 may register at no charge. Otherwise they must register at the "accompanying person" or "daily ticket" rates.

### Accessibility for Registrants with Disabilities

EGS wants to ensure that all registrants have access to the sessions and events they wish to attend, and it will therefore gladly assist with arrangements for anyone with special requirements.

Registrants with wheelchairs should use the lift in the Entrance Hall - Lower Level on the right hand side; a security officer will help to access all levels and meeting rooms from this point.

### Registration Benefits

The registration fee includes the publication of abstracts in *Annales Geophysicae Supplement*, the conference material incl. one part of the Abstract Books and the Programme Book, use of video/PC demonstration equipment incl. Internet, refreshments during breaks, the Icebreaker Reception, the Section/IWG Business Luncheons, and the participation in all other activities during the meeting.

Moreover, participants, who have registered at the full-meeting on-site rate, are eligible for one free personal subscription to one of the following EGS journals: *Annales Geophysicae*, *Hydrology and Earth System Sciences* or *Nonlinear Processes in Geophysics*.

### Conference Hours

#### Oral Presentations

*Monday-Thursday, 20-23 April, 08.30/9.00-16.30/17.00*  
*Friday, 24 April, 08.30/09.00-18.00/18.30*

#### Poster Presentations

*Tuesday-Thursday, 21-23 April, 16.30/17.00-19.00/19.30*

#### Exhibition

*Tuesday-Thursday, 21-23 April, 09.00-19.00/19.30*

### EGS Sponsored Events

#### Opening & Award Ceremony

Monday, 20 April, 17.00-18.15  
Lecture Theatre Apollon



### **Society Lecture - Monday**

Monday, 20 April, 18.15-19.00

Lecture Theatre Apollon

H. Wänke: *Recent Studies of Planet Mars*

### **Society Lecture - Tuesday**

Tuesday, 21 April, 17.00-18.00

Lecture Theatre Athena

P. Kind: *The 5th Framework Programme*

### **Icebreaker Reception**

Monday, 20 April, 19.30-22.00

AGORA2 & MYKONOS FOYER

### **Complimentary Refreshments**

#### Coffee Breaks

Monday-Friday, 20-24 April, except Wednesday, 22 April,  
10.00-11.30

Monday, 20 April, 16.30-17.00

Friday, 24 April, 15.00-16.30

Level 0 - Méditerranée

Level 2 - Mykonos Area & Athéna Foyer

Level 3 - Social Area Les Muses

#### Poster Coffees

Tuesday-Thursday, 21-23 April, 17.00-18.00, Poster Areas

Level 2 - AGORA2 & Athéna Foyer

Level 3 - AGORA3 & Social Area Les Muses

### **Section/IWG Business Meetings**

Sandwiches & Refreshments are complimentary

Wednesday, 22 April, 12.00-14.00

Solid Earth (SE)	= Room R10
Geodesy (G)	= Room R5
Hydrology (HS)	= Room Gallieni 3
Oceans & Atmosphere (OA)	= Room Clio
Solar-Terrestrial Sciences (ST)	= Room M8
Planetary Sciences (PS)	= Room M4
Nonlinear Geophysics (NP)	= Room M3
Natural Hazards (NH)	= Room R1

### **Council Meetings**

Hotel NOVOTEL CENTRE

Sunday, 19 April, 15.00-19.00

Thursday, 23 April, 19.00-24.00

### **President's Dinner**

Monday, 20 April, 20.00, Hotel Negresco (by invitation only)

### **Reception for Conveners**

Wednesday, 22 April, 19.30-21.00, Level 2 - Athéna Foyer  
(by invitation only)

### **Best Poster Competition**

Ballot papers should be picked up, completed, signed and  
returned to the Congress Counter

Monday-Thursday, 20-23 April, 08.00-18.00

Friday, 24 April, 08.00-12.00

Only posters with more than 10 votes will enter the final  
election procedure. The three best posters will each receive  
one free admission to the next General Assembly.

### **Lunch**

Monday-Friday, 20-24 April, 12.30/13.00-14.00

Salads, sandwiches, desserts and drinks are served:

Level 2 - Mykonos Area & Athéna Foyer

Level 0 - outside of Méditerranée

Otherwise, there are more than 20 restaurants and bars in  
the Bd. Risso and Av. de la République (all less than 10  
min. away)

### **Happy Hours**

Meet your colleagues for informal discussions (cash bar) :  
Level 2 - Mykonos Area, during conference hours

### **Events Sponsored by Other Organizations**

#### **Saturday, 18 April**

09.00 CSTG Satellite and Lunar Laser Ranging Subcom-  
mission Steering Committee, Hotel Aston, Contact:  
J. Degnan

#### **Sunday, 19 April**

09.00 CSTG Executive Committee Meeting, Hotel Aston,  
Contact: H. Drewes

#### **Tuesday, 21 April**

- 16.30 International VLBI Organization - Draft Document  
Discussion, Room Gallieni 3, Contact: Th. A. Clark  
and N.R. Vandenberg
- 18.00 ESFE Working Group Meeting, Room Gallieni 2,  
Contact: C. Prodehl
- 19.00 CSTG Satellite and Lunar Laser Ranging Subcom-  
mission Meeting, Room Hermes, Contact: J. Degnan

#### **Wednesday, 22 April**

18.00 *Geophysical Journal International* Editorial Board  
Reception, Foyer Hermes, Contact: A. Khan

#### **Thursday, 23 April**

- 17.00 IGCP 400 Project Meeting, Room Mykonos, Con-  
tact: D. Delvaux
- 19.00 Solid Earth Tides in Space Geodetic Techniques  
Working Group Meeting, Room Gallieni 2, Contact:  
H. Schuh

#### **Friday, 24 April**

09.00 International Lithospheric Programme, Room R9,  
Contact: J. Dañoibeitia

### **E-Mail**

Level 2 - Room Gallieni 1

Monday-Thursday, 20-23 April, 08.00-18.00

Friday, 24 April, 08.00-14.00

## Business Center

Telephone, Telefax and Photocopies  
Entrance Hall - AGORA1 behind Congress Counter  
Monday-Thursday, 20-23 April, 08.00-18.00  
Friday, 24 April, 08.00-14.00

## Messages

Contact staff at Congress Counter and Message Boards in  
Entrance Hall - AGORA1 during congress hours.

## Lost-and-Found

Contact staff at Congress Counter in Entrance Hall -  
AGORA1.

## Bank Services

Exchange of money and cash payment on traveller cheques  
and credit cards (VISA, Mastercard and Diners)  
Entrance Hall - Ground Floor  
Sunday, 19 April, 15.00-20.00  
Monday-Thursday, 20-23 April, 08.00-18.00  
Friday, 24 April, 08.00-12.00

## Post Office, Pharmacy & Credit Card Suspenders

The closest *Post Office* (about 400 m) is 34 rue Barb  ris.  
Opening hours: Monday-Friday, 09.00-17.00

The closest *Pharmacy* (about 150 m) is at the corner rue  
Smolet/avenue de la R  publique.  
Opening hours: Monday-Friday, 09.00-19.30  
The closest *Night Pharmacy* is in 7 rue Mass  na, Tel:  
0493877894  
Opening hours: Monday-Friday, 19.30-08.30

There are *Credit Card Suspenders* at the major banks, such  
as Cr  dit Agricole or Cr  dit Lyonnais, at 27 or 35 avenue  
de la R  publique, respectively.

## Section/IWG Offices

Offices for the EGS Section and IWG Presidents and  
Secretaries: Level 2 - Rhodes, parallel to Lecture Theatre  
Ath  na

## President's & Council's Lounges

*Salon Robert C. Lonati*, Entrance Hall - Lower Level, left-  
hand side next to the bank.

## Editorial Office

On-site Editorial Office of the EGS proceedings journal  
*Physics and Chemistry of the Earth*.  
Entrance Hall - AGORA1 behind the Congress Counter  
Monday-Friday, 20-24 April, 08.00-18.00

## Job Centre

Entrance Hall - AGORA1 behind the Congress Counter  
Monday-Friday, 20-24 April, 08.00-18.00

## Job Candidates

Bring 5 copies of your res  m   or CV to be kept on file for  
employers to review, check the job postings daily and leave  
messages for those employers you would like to meet.

## Employers

Pre-register your job announcement with EGS or register it  
on-site at the Job Centre and review the res  m  s and CVs  
during the meeting.

## Wardrobes

Guarded wardrobes are located both on the left- and right-  
hand side in the Entrance Hall - Lower Level  
Sunday, 19 April, 15.00-20.00  
Monday-Friday, 20-24 April, 08.00-20.00

## Insurance Coverage

Participants may purchase medical insurance protection  
during their attendance of the EGS General Assembly at the  
Congress Counter during the opening hours. The price is  
USD 5,- per day.

## Instructions to Speakers

The final programme order will not be changed except in  
unexpected emergency situations and when marked on the  
on-site *Daily Programme* posted outside the corresponding  
lecture room.

Please be in your *lecture room* at least 10 min *before* your  
session starts. Prepare your slides with your name, a  
sequence number and a thumb mark before delivering them  
to the projectionist. Each projectionist will have a copy of  
the programme. Please inform him or her on the position of  
your presentation.

If you intend to present a *video or PC demonstration* paper,  
please contact the technical staff in the respective Poster  
Areas well in advance. It is highly recommended to perform  
a test-run before your actual presentation.

Since the *posters* may be on display for the entire week of  
the conference, please make sure to put your poster up as  
soon as possible after your arrival at the conference and to  
take it down as late in the week as possible. Use only the  
board(s) actually allocated for your poster, and please be at  
your display for presentation during the Authors in Atten-  
dance Time(s) given in the conference programme.

Please, deliver 4 copies of your manuscript to the *Editorial  
Office* at the assembly and make sure that your manuscript  
number is included on all copies. This, however, only holds  
for sessions for which the publication of "proceedings" in  
*Physics and Chemistry of the Earth* has been decided upon  
before the meeting. If this decision is reached at or after the  
meeting, you will receive a written invitation by the EGS  
Office after the meeting.

## Oral Presentations

### Lecture Rooms

All lecture rooms are located in the Congress Centre (see  
front and back covers).

In general, each lecture room is equipped with two overhead projectors with transparencies and felt pens, one slide projector, a pointer, and a speaker's desk. In addition, there is one large screen or two separate screens to allow for double projection at any time.

One projectionist will be present in each lecture room. He/she will accept and show the slides, put up the daily programme, and help the chairperson and the speakers.

In general, 15 min. are reserved for contributed and 25-30 min. for solicited papers, including time for discussion and changeover. For oral summaries of poster papers 2-5 min. are foreseen (1 transparency only).

### Slides & Co

Speakers intending to show slides during their presentation, must deliver them clearly marked to the corresponding projectionist well before the beginning of the respective session.

All slides will be projected by special slide projectors from the back of each lecture room. Speakers should therefore prepare their slides to withstand the heat. Otherwise they should contact the conference staff for re-framing their slides in special glass.

For speakers to preview their slides and/or to prepare viewgraphs:

Room **Slides & Co**, Hermes Foyer, Level 2 - Rhodes  
Monday-Thursday, 20-23 April, 08.00-18.00  
Friday, 24 April, 08.00-14.00

### Poster Presentations

#### Poster Areas

Poster presentations are organized in Poster Sessions, and Poster Sessions belonging thematically to the same overall topic are organized in separate Poster Areas. An overview and a summary are included on the last pages of this book.

#### Poster Boards

In general, for each poster paper one numbered poster board is reserved with a clear dimension of 91 cm (width) x 240 cm (height). All the material necessary for attaching the poster to the poster board is available at the EGS Facility Desk in the respective poster area. In addition, there are assistants to help authors in putting up or in taking down their posters.

The number of each poster paper and of its corresponding poster board is given in the appropriate session programme at the left hand side of the author(s)-and-title block of each contribution. The first part of this number indicates the index of the corresponding Poster Area and the second part the running number of the appropriate poster board in that area.

#### Display Time

In general, the time for the display of all posters is from **Monday, 14.00, to Friday, 13.00**, i.e., practically the entire week of the conference. Therefore, authors are kindly asked to put up their posters as soon as possible after their arrival at the conference and to take them down as late as possible.

In this way conference participants are able to view the posters at any time during the conference hours.

### Authors in Attendance Time(s)

the Authors in Attendance Time(s) is (are) the time(s) when the respective authors of a Poster Session must be present at their display for presentation. These times are allocated during **Tuesday-Thursday, 17.00-19.00/19.30**. In general, during this (these) time(s), the Chairperson of the corresponding Poster Session guides the group of participants from poster to poster, in order to guarantee that each author has the opportunity to present his/her poster. The Authors in Attendance Time(s) for each Poster Session is provided in the conference programme.

### Videos

Multiple norm VHS video recorders with monitors are installed in the following Poster Areas:

**AGORA2** - HS Area (lift close to Apollon)

**Rhodes** - SE Area (besides escalator to Méditerranée)

**Les Muses** - OA Area (next to Social Area)

Tuesday-Thursday, 21-23 April, 08.00-19.00/19.30

### Personal Computer

A Personal Computer with monitor is installed in the Poster Area:

**Rhodes** - SE Area (besides escalator to Méditerranée)

Tuesday-Thursday, 21-23 April, 08.00-19.00/19.30

### Paper Identification Number for Proceedings

Contributions for Sessions for which the Conveners have foreseen the publication of "proceedings" in *Physics and Chemistry of the Earth* have their own manuscript identification numbers, which are included in the programme at the left hand side of their corresponding author(s)-and-title block. The first part of this number indicates the index of the corresponding Session and the second part the running number of the appropriate paper in the Session. This identification number is for reference purposes, e.g., as MS-No. for manuscripts to be submitted for publication in one of the "proceedings" issues. In case it is decided at the meeting that "proceedings" of a particular session will be published in *Physics and Chemistry of the Earth*, the corresponding authors will be informed by the EGS Office after the assembly, providing also the manuscript numbers, the address of the Editor to whom the manuscripts should be sent, and the deadline date for submission.

### Guidelines for Chairpersons

In order for the European Geophysical Society to maintain the quality of its scientific programmes, it is essential that the Chairpersons of the EGS Sessions carry out their functions properly. Below please find a brief description of these functions:

#### 1. General Information

In general, each lecture room is equipped with two overhead projectors, one slide projector, one or two large

screens to allow for double projection at any time, a pointer and a speaker's desk. In order not to disrupt the session schedule, it will be possible to show VHS videos and PC computer demonstrations only in the Poster Areas.

One projectionist will be present in each lecture room. S/he will accept and show the slides, hand out transparencies and felt pens, put up the "Daily Session Programme", help the Chairpersons and the speakers and contact when necessary the technical staff of the congress centre.

All poster presentations will take place in selected Poster Areas. For each poster contribution one numbered poster board will be reserved from Monday, 14.00, to Friday, 13.00 (Display Time). The number, which will also appear in front of the corresponding poster paper in the session programme, indicates the poster area (2 letters) and the position of the board within the area (3 digit running number). At the special time interval included in the session programme (Authors in Attendance Time) the Chairperson(s) and the authors should gather at the session displays for the presentation of the posters.

Authors have been informed correspondingly.

## 2. Conducting the Session

The Chairperson is responsible for conducting the session. S/he is expected to open and close the session on time and to ensure that the speakers of the session are present and that they are able to make their presentations without disruption. All times allocated for presentations include also the time for discussions and for changeover!

## 3. Verification of Presenting Authors

Before each presentation the Chairperson should verify that the person to speak is listed in the programme as one of the authors. If this is not the case and the person to speak is not sufficiently acquainted with the work in order to answer questions, only the title of the paper should be read.

## 4. Time Schedule

In view of the many parallel sessions, the time schedule of the session should be strictly kept. Any disruption is extremely annoying for those wishing to attend certain presentations. Therefore, if a gap should occur in the time schedule and no stand by paper is available to fill in, discussions on the previous talks or short oral summaries of poster papers, if not yet foreseen in the programme, should be stimulated.

## 5. Programme Changes & Verification of Papers actually presented

Any programme changes received by the EGS Office after the Programme Book has been forwarded to the printer will be included in the "Daily Programme": a copy of the revised session programme enlarged to the size of A3 and put up outside of the corresponding lecture room in the morning before the session starts. The chairperson will receive her/his copy from the projectionist, and s/he is kindly asked to return it after the session. Any last minute modifications as well as a remark as to whether or not a paper has been actually presented will be noted on these programmes by the projectionist.

## 6. Poster Sessions

Chairpersons for poster sessions should gather and guide the audience from poster to poster in the order of their appearance, and they should invite the authors to present their posters for about 5-10 min. and stimulate discussions afterwards.

## Exhibition

Participants are invited to visit the exhibition stands on Level 2 - AGORA2 and Mykonos Area. Here they will find the exhibits of the following companies (in alphabetical order):

**Academic Press Ltd.** *Booth #11*  
Harcourt Brace Jovanovich,  
Publishers 24-28 Oval Road  
London NW1 7DX Tel: +44-171-267-4466  
United Kingdom Fax: +44-171-267-3811  
Attn. Lisa Agostini and Rachel Bridgman

**AGICO, Inc.** *Booth #04*  
Jecna 29a  
621 00 Brno Tel: +420-5-7264-323  
Czech Republic Fax: +420-5-7264-328  
Attn. Libro Vejmelek and Jiri Pokorny

**American Geophysical Union** *Booth #01*  
2000 Florida Avenue, N.W.  
Washington, DC 20009-1277 Tel: +1-202-939-3208  
USA Fax: +1-202-328-0566  
Attn. Judy Holoviak and Maureen Matkovich

**Cambridge University Press** *Booth #03*  
The Edinburgh Building  
Shaftesbury Road  
Cambridge CB2 2RU Tel: +44-1223-312393  
United Kingdom Fax: +44-1223-325891  
Attn. M. Lloyd and H. Millward

**EC DG XII/D** *Booth #08*  
SDME 7/74  
European Commission, DG XII -  
Science, Research & Development  
200 Rue de la Loi  
1049 Brussels Tel: +32-2-295-3105  
Belgium Fax: +32-2-296-3024  
Attn. H. ter Mors

**Elsevier Science** *Booth #14*  
P.O. Box 211  
1000 AE Amsterdam Tel: +31-20-4853-786  
The Netherlands Fax: +31-20-4853-809  
Attn. Jacques Kiebert, Anna Ypma

**Geofrance 3D** *Booth #13*  
DR/MGG  
BRGM  
B.P. 6009  
45060 Orleans Cedex 02 Tel: +33-238-643219  
France Fax: +33-238-644702  
Attn. P. Ledru

**International GPS Service** *Booth #02*  
4800 Oak Grove Drive  
Pasadena, CA 91109 Tel: +1-818-354-9428  
USA Fax: +1-818-393-6686  
Attn. Priscilla Van Scoy and David Jefferson

**John Wiley & Sons Ltd.**

Baffins Lane, Chichester

Sussex PO19 1UD

United Kingdom

Attn. Dolores Kelly and Sally Wilkinson

**Booth #05**

Tel: +44-1243-770259

Fax: +44-1243-770432

**Springer-Verlag GmbH & Co. KG**

Tiergartenstr. 17

69121 Heidelberg

Germany

Attn. Nicola Klupsch and Wolfgang Engel

**Booth #12**

Tel: +49-6221-487-994

Fax: +49-6221-487-908

**Kluwer Academic Publishers**

Spuiboulevard 50

3300 AZ Dordrecht

The Netherlands

Attn. Petra van Steenberghe and Eugene de Geus

**Booth #06**

Tel: +31-78-6392-124

Fax: +31-78-6392-323

**Wisepress Ltd.**

The Old Lamp Works

25 High Path

Merton Abbey

London SW19 2JL

United Kingdom

Attn. N.N.

**Booth #09**

Tel: +44-181-715-1812

Fax: +44-181-715-1722

**Refraction Technology, Inc.**

2626 Lombardy Lane, suite 105

Dallas, TX 75220

USA

Attn. Leonid Zimakov

**Booth #07**

Tel: +1-214-353-0609

Fax: +1-214-353-9659

**Sponsorship and Financial Support**

We wish to thank the following for their contribution to the success of this conference: United States Air Force European Office of Aerospace Research and Development, United States Office of Naval Research, Europe.

**Scintec Atmosphärenmesstechnik GmbH****Booth #10**

Hölderlinstr. 31

72074 Tübingen

Germany

Attn. Volker Thiermann

Tel: +49-7071-921411

Fax: +49-7071-551431

## Invitation to the Opening & Award Ceremony and the Society Lecture Apollon, 20 April 1998, 17.00

1. Welcome by the President of the European Geophysical Society, Heinrich Wänke

2. Presentation of the Society's Awards and Medals 1998

2.1. Honorary Membership  
Aksel C. Wiin-Nielsen

2.6. John Dalton Medal  
James C.I. Dooge

2.2. EGS Badge Award  
James S.G. McCulloch  
Roberto Sabadini

2.7. Fridtjof Nansen Medal  
Jean-Francois Minster

2.3. Stephan Mueller Medal  
Peter A. Ziegler

2.8. Vilhelm Bjerknes Medal  
Arnt Eliassen

2.4. Beno Gutenberg Medal  
Markus Báth

2.9. Milutin Milanković Medal  
Syukuro Manabe

2.5. Vening Meinesz Medal  
Reiner Rummel

2.10. Hannes Alfvén Medal  
Charles F. Kennel (for 1997)  
Carl-Gunne Fälthammar (for 1998)

3. Plenary Meeting

Inauguration of the EGS President and the newly elected Section Presidents, 1998-2000

4. Society Lecture

Heinrich Wänke: *Recent Studies of Planet Mars*

These events are followed by the Icebreaker Reception on Level 2, AGORA2 and MYKONOS AREA and by the President's Dinner in the Hotel Negresco for the 1998 Awardees and Medalists, respectively.

**Invitation to the Open Section & IWG Meetings**  
**Wednesday, 22 April 1998, 12.00-14.00**

**Meeting Rooms**

R10	=	Solid Earth Geophysics (SE)	M8	=	Solar-Terrestrial Sciences (ST)
R5	=	Geodesy (G)	M5	=	Planetary & Solar System Sciences (PS)
Gallieni3	=	Hydrological Sciences (HS)	M3	=	Nonlinear Processes (NP)
Clio	=	Oceans & Atmosphere (OA)	R1	=	Natural Hazards (NH)

- |   |  |
|---|--|
| 1. Welcome and Introduction by the President/<br>Chairman | 6. Candidates for President 2000-2002                    |
| 2. Agenda   | 7. Additional Sub-Sections/Sub-Groups or IWGs.           |
| 3. Report on Society and Section/IWG Activities           | 8. Section Medal(s) and appropriate candidates for 1999. |
| 4. Scientific Programme for the General Assembly<br>1999  | 9. Candidates for Society Awards 1999.                   |
| 5. Suggestions for the Millennium Conference              | 10. New topical journals or other publications.          |
|   | 11. Nomination of editors as required.                   |
|   | 12. Any other business.                                  |

**Sandwiches & Refreshments are complimentary**

**European Geophysical Society**

*Inviting the scientists of the world to participate in the*

**Millennium Conference on Earth,  
Planetary & Solar Systems Sciences**

**- 25th General Assembly -**

**Fortezza da Basso, Florence, Italy  
3-7 April 2000**

Join this unique celebration of the past and the new millennium in the capital of Renaissance and in the beauty of Tuscany.

Suggestions regarding the scientific programme and any inquiries should be addressed to:

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
EGS@COPERNICUS.ORG  
<http://www.copernicus.org/EGS/EGS.html>

# 1998 Membership Rates

## Annales Geophysicae (12 issues/year)

The leading interdisciplinary, boundary-layer journal covering the physics and chemistry of the oceans, of the lower, middle and upper atmosphere of the Earth, of the Sun and of the interplanetary medium, as well as the marine boundary layer and the air-sea interface, the interface between the atmosphere and the biosphere, lithosphere, hydrosphere, ionosphere and magnetosphere and solar-terrestrial interaction.

Subscription Rate			Postage Surcharge
Member	DEM	150,-	incl.
Student	DEM	75,-	incl.
Em. Sc.	DEM	75,-	incl.

## Climate Dynamics (8 issues/year)

Welcomes papers containing original diagnostic, analytical or numerical modeling research on the structure and behavior of the atmosphere, oceans, cryosphere, biomass and land surface as interacting components of the dynamics of global climate as well as contributions focused on selected aspects of climate dynamics on particular scales of space or time.

Subscription Rate			Postage Surcharge
Member	DEM	98,-	Surface mail: DEM 34,-
Student	DEM	98,-	Airmail (outside
Em. Sc.	DEM	98,-	Europe) DEM 53,-

## Geophysical Journal International (12 issues/year)

Covers all disciplines of the physics and chemistry of the solid earth.

Subscription Rate			Postage Surcharge
Member	DEM	150,-	incl.
Student	DEM	55,-	incl.
Em. Sc.	DEM	55,-	incl.

## Hydrology and Earth System Sciences (4 issues/year)

The international and interdisciplinary journal for the publication of original research in hydrology, viewed as a separate geoscience alongside the atmospheric, ocean and solid earth sciences. HESS serves not only the community of scientific hydrologists, but all geoscientists who wish to publish new findings on the interactions between hydrology and other physical, chemical and biological processes within the Earth System.

Subscription Rate			Postage Surcharge
Member	DEM	140,-	Airmail (outside
Student	DEM	140,-	Europe) DEM 16,-
Em. Sc.	DEM	140,-	

## Journal of Atmospheric Chemistry (9 issues/year)

The key journal for the study of the chemistry of the Earth's atmosphere with emphasis on the region below about 100 km, including also topics related to meteorology, oceanography, soil science and biology.

Subscription Rate			Postage Surcharge
Member	DEM	240,-	incl.
Student	DEM	240,-	incl.
Em. Sc.	DEM	240,-	incl.

## Journal of Geodynamics (8 issues/year)

The interdisciplinary journal for solid earth research in geodetic, geophysical, geological and geochemical geodynamics, in particular of large scale processes.

Subscription Rate			Postage Surcharge
Member	DEM	110,-	incl.
Student	DEM	110,-	incl.
Em. Sc.	DEM	110,-	incl.

## Newsletter (4 issues/year)

EGS's quarterly bulletin carrying articles on the results of recent research, upcoming meetings, as well as Society's news.

Subscription Rate			Postage Surcharge
included in membership due.			incl.

## Nonlinear Processes in Geophysics (4 issues/year)

An interdisciplinary journal published jointly by the EGS and the AGU for the publication of original research involving nonlinear processes in geophysics in the broadest sense. Contributions from both dynamical system theorists as well as geophysicists applying nonlinear methods to fundamental problems in geophysics are welcome.

Subscription Rate			Postage Surcharge
Member	DEM	80,-	Surface mail: DEM 16,-
Student	DEM	40,-	Airmail (outside
Em. Sc.	DEM	40,-	Europe) DEM 32,-

## Physics and Chemistry of the Earth (thematic issues)

For the publication of short, self-contained and refereed papers presented at geo- and planetary sciences' conferences.

Subscription Rate			Postage Surcharge
Member	DEM	195,-	incl.
Student	DEM	195,-	incl.
Em. Sc.	DEM	195,-	incl.

## Planetary and Space Science (12 issues/year)

The key journal for planetary and solar system research, covering cosmochemistry and the origin and evolution of the solar system; small bodies, dust and rings; terrestrial and outer planets and their satellites, including geology, mineralogy, geophysics and dating as well as the formation and dynamics of planetary atmospheres, ionospheres and magnetospheres and their interaction with the solar wind; exobiology and celestial mechanics.

Subscription Rate			Postage Surcharge
Member	DEM	165,-	incl.
Student	DEM	165,-	incl.
Em. Sc.	DEM	165,-	incl.

## Surveys in Geophysics (6 issues/year)

Up to date summaries of research in all the disciplines covered by the Society. Subscribers are kept informed also of the subjects outside their own specialties.

Subscription Rate			Postage Surcharge
Member	DEM	165,-	incl.
Student	DEM	165,-	incl.
Em. Sc.	DEM	165,-	incl.

## Tectonics (6 issues/year)

Includes papers on the deformation of the crust, including mountain building, rifting, seismotectonics, movements of terranes, and plate interactions, as well as contributions in the areas of analytical, synthetic and integrative tectonics.

Subscription Rate			Postage Surcharge
Member	DEM	145,-	Surface: DEM 36,-
Student	DEM	75,-	Airfreight: DEM 85,-
Em. Sc.	DEM	75,-	Airmail: DEM 150,-

## Free Membership

It is a tradition of the European Geophysical Society that participants in its General Assemblies having registered at the Full/Student Non EGS Membership Rates are automatically recognized as Regular/Student Members of the Society for the year of the meeting, respectively.

### 1998 Membership Subscription

Name Badge \_\_\_\_\_

\_\_\_\_\_

Membership-ID No. (if available) \_\_\_\_\_

Journal(s)/Rate(s)/Surcharge(s) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Total amount DEM \_\_\_\_\_

For the 1998 General Assembly, appropriate pre-registrants should have already received their blue 1998 Membership Cards, while the on-site registrants will receive theirs shortly after the conference. Moreover, they are invited to enjoy the benefits of membership and take a personal subscription to the 10 official journals of the EGS at the greatly reduced membership rates listed on the left hand page.

☐ Cash at the Registration Desk

☐ By cheque

☐ By credit card

☐ Eurocard/Mastercard/Access

☐ VISA

☐ American Express

Number: \_\_\_\_\_

Valid until: \_\_\_\_\_

Cardholder: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

## Free Personal Subscription

Appropriate attendees that would like to use this offer should complete this form and return it to the EGS Office by **31 May 1998** at the very latest.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Amount paid: \_\_\_\_\_

Participants in the 1998 General Assembly of the European Geophysical Society that have pre-registered/registered at the full **ON-SITE EGS MEMBER/NON EGS MEMBER RATES** are eligible for a **FREE ANNUAL PERSONAL SUBSCRIPTION** to one of the following EGS journals (Please tick only one journal per registration):

☐ *Annales Geophysicae*

☐ *Hydrology and Earth System Sciences*

☐ *Nonlinear Processes in Geophysics*

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
E-mail: [EGS@COPERNICUS.ORG](mailto:EGS@COPERNICUS.ORG)  
<http://www.copernicus.org/EGS/EGS.html>



## EGS Job Centre

In order to promote the mobility of researchers in the Earth, planetary and space sciences on a pan-European international level in positions in academic institutions, in research organizations and in industry, the European Geophysical Society has established a *Job Centre* at its annual General Assembly where colleagues seeking employment and representatives of organizations and companies announcing vacancies can meet and exchange information. These facilities are available only at the conference and they are complimentary for both sides!

### Companies and Organizations announcing a vacancy

A company or an organization announcing a vacancy is kindly asked to deliver to the Job Centre at the meeting or to the EGS Office shortly before the meeting

- a completed *Employer Registration Form* (one form for each position) and
- at least 5 copies of the announcement of the position in question.

The staff at the EGS Job Centre will assign one individual *Employer Number* to each position offered and will post one copy of the announcement or description on the *Message Board*, arranged according to the EGS Sections, and include the other copies in the respective *Employer Folder*.

### Candidates seeking a position

Candidates seeking a position are kindly asked to personally bring to the Job Centre

- a completed *Job Centre User Survey* form, and
- about 5 copies of their résumé or CV.

The staff at the EGS Job Centre will assign one individual *Job Centre Number* to each set of résumés/CVs and will then include them in the appropriate *Résumé Folders*, arranged according to the EGS Sections. Only résumés of candidates actually present at the meeting will be considered.

### Guidelines for Employers and Candidates

Interested candidates should look through the postings on the *Message Board* and either contact the "Employer" directly, if a representative of the organization or company in question is **not** available for an interview during the conference, or otherwise, complete the *Candidate Message Form* and contact the desk of the Job Centre; here the form will be inserted in the corresponding *Employer Folder*. The representative will then find an appropriate notice on the *Message Board*, contact his/her folder and find the candidate's résumé or information regarding the date, time and place of a personal meeting with the candidate.

"Employers" are invited to look through the *Résumé Folders*, arranged according to the EGS sections, containing the résumés of candidates seeking a position. If an appropriate candidate has been identified, the "Employer" is asked to complete the *Employer Message Form* and to contact the desk of the Job Centre; here the form will be inserted in the corresponding *Résumé Folder*. The respective candidate will then find an appropriate notice on the *Message Board*, contact his/her résumé folder and find the information about the date, time and place of a personal meeting with the representative of the company or organization in question or its address for further contact.



## XXIII General Assembly Job Centre

**AGORA1 - Level 1, behind the Congress Counter**

**Monday-Friday, 20-24 April 1998, 08.00-18.00**

Look through the announcements at the *Job Postings' Boards*, contact the *Message Board* at the Job Centre or contact its staff. Please, pick up your résumés/CVs before leaving the conference!



## European Geophysical Society

EGS Office Tel: (49)-5556-1440  
Max-Planck-Str. 13 Fax: (49)-5556-4709  
37191 Katlenburg-Lindau EGS@COPERNICUS.ORG  
Germany <http://www.copernicus.org/EGS/EGS.html>

### Employer Registration Form

Any company or organization wishing to announce a vacancy at the Job Centre of the General Assembly of the European Geophysical Society is kindly asked to deliver to the Job Centre at the meeting or to the EGS Office about one week before the meeting

- a completed *Employer Registration Form* (see reverse side), and
- at least 5 copies of the announcement/description of the position in question.

The staff at the EGS Job Centre will assign an individual *Employer Number* to this offer, post one copy of the announcement on the *Message Board*, where interested candidates will see it, and include the other copies in the *Employer Folder*.

Interested candidates will contact you directly, if a representative of your company or organization will not be available for an interview at the meeting; otherwise, they will leave you a message in your folder at the Job Centre. Please check the Job Centre *Message Board* daily so that you will not miss the opportunity to meet with prospective employees.

Please, look also through the *Résumé Folders* containing the résumés/CVs of candidates seeking a position. They are at the Job Centre for your use.

**Remember your *Employer Number* to pick up messages.**



## Employer Registration Form

(please complete one form for each vacancy)

### 1. Contact Address

Company \_\_\_\_\_

P.O. Box/Street \_\_\_\_\_

Zip Code \_\_\_\_\_ City \_\_\_\_\_ Country \_\_\_\_\_

Contact Person \_\_\_\_\_ Department \_\_\_\_\_

Telephone \_\_\_\_\_ Telefax \_\_\_\_\_

Electronic Mail \_\_\_\_\_ Telex \_\_\_\_\_

### 2. Category

Please mark the category/categories you would like your announcement/description posted:

- |   |  |
|---|--|
| <input type="checkbox"/> Solid Earth Geophysics & Geology | <input type="checkbox"/> Atmospheric Sciences  |
| <input type="checkbox"/> Geodesy                          | <input type="checkbox"/> Space & Planetary Sciences  |
| <input type="checkbox"/> Hydrology                        | <input type="checkbox"/> Geotechnical & Environmental Engineering                                |
| <input type="checkbox"/> Oceanography                     | <input type="checkbox"/> Information Technology, Software Development<br>& System Administration |

### 3. Questionnaire

YES NO

☐ ☐ Will you be reviewing the Résumés Folders?

☐ ☐ Will you be available for an interview at the meeting?

If you answered YES, when will you be available?

Day: \_\_\_\_\_ Time: \_\_\_\_\_

Please bring this completed form together with at least 5 copies of the announcement/description of the vacancy in question to the Job Centre at the EGS General Assembly or mail the material to the EGS Office by at least 1 week prior to the meeting.

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
EGS@COPERNICUS.ORG



## European Geophysical Society

EGS Office Tel: (49)-5556-1440  
Max-Planck-Str. 13 Fax: (49)-5556-4709  
37191 Katlenburg-Lindau EGS@COPERNICUS.ORG  
Germany <http://www.copernicus.org/EGS/EGS.html>

### Job Centre User Survey Form

Candidates seeking a position are kindly asked to bring to the Job Centre of the General Assembly of the European Geophysical Society

- a completed *Job Centre User Survey* form (see reverse side), and
- about 5 copies of their résumé or CV of max. 4 pages each.

The staff at the EGS Job Centre will assign one individual *Job Centre Number* to your set of résumés/CVs and will then include them in the appropriate Résumé Folders. Only résumés of candidates actually present at the meeting will be considered.

Employers have access to your résumés at all times during the meeting. Please check the *Job Centre Message Board* daily so that you will not miss the opportunity to meet with prospective employers.

Please, look also through the job postings and take action. If you have an interest in a job announcement, leave a message through the *Job Centre Message Board*.

**Remember your *Job Centre Number* to pick up messages.**



# EGS Job Centre

Job Centre Number  
C 1997/

.....

## Job Centre User Survey

(this form will be attached to your résumé material)

### 1. Personal Information

Male ☐ Female ☐ Age \_\_\_\_\_ Nationality \_\_\_\_\_

Highest degree attained/in progress \_\_\_\_\_ Year attained/expected \_\_\_\_\_

Currently employed as \_\_\_\_\_ at \_\_\_\_\_

Educational status (ascending in time)

degree/position	year attained	University/Company
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

### 2. Job Search Information

Please mark the category/categories you would like your résumé placed:

- |   |   |
|---|---|
| <input type="checkbox"/> Solid Earth Geophysics & Geology | <input type="checkbox"/> Atmospheric Sciences   |
| <input type="checkbox"/> Geodesy                          | <input type="checkbox"/> Space & Planetary Sciences   |
| <input type="checkbox"/> Hydrology                        | <input type="checkbox"/> Geotechnical & Environmental Engineering                             |
| <input type="checkbox"/> Oceanography                     | <input type="checkbox"/> Information Technology, Software Development & System Administration |

Type of job you are looking for:

- |                   |  |  |
|-------------------|--|--|
| <u>Temporary:</u> | <input type="checkbox"/> Research Post-doc | <input type="checkbox"/> Contract Employee (Project) |
|                   | <input type="checkbox"/> Lecturer/Teacher  | <input type="checkbox"/> Academia (Teaching)         |

Other: \_\_\_\_\_

- |                   |                                   |   |                                     |
|-------------------|-----------------------------------|---|-------------------------------------|
| <u>Permanent:</u> | <input type="checkbox"/> Industry | <input type="checkbox"/> University     | <input type="checkbox"/> Government |
|                   | <input type="checkbox"/> Research | <input type="checkbox"/> Technical      |                                     |
|                   | <input type="checkbox"/> Teaching | <input type="checkbox"/> Administrative |                                     |

Other: \_\_\_\_\_

### 3. Personal Statement

# Conference Publications

## Conference Publications

EGS offers a complete and comprehensive set of different types of publications for contributions presented at EGS General Assemblies and Topical Conferences as well as at meetings organized by any other side. This includes the publication of

- **abstracts** in the journal *Annales Geophysicae Supplement*,
- **proceedings** in form of short but self-contained, refereed articles in separate thematic issues of the journal *Physics and Chemistry of the Earth*,
- **letters, short communications** and **extended articles** as separate papers in or in special issues of 10 topical EGS journals,
- **independent chapters** in books issued as part of the four EGS Book Series.

Contact the EGS Office for any further information.

## Book of Abstracts

Traditionally all abstracts of contributions submitted to a General Assembly are included free of charge in the Book of Abstracts, once they have been accepted by the appropriate Convener(s). This includes also papers of authors who most likely will be unable to participate in the meeting because of financial restrictions.

Moreover, in order to guarantee a wider circulation, the Book of Abstracts is published as a supplement of the Society's journal *Annales Geophysicae*.

In this way the Book of Abstracts has become an open forum for fast distribution of results of geophysical research on a pan-European, international level.

The abstracts of the various symposia are compiled in four separate parts:

- Part I: Society Symposia, Solid Earth Geophysics and Geodesy.
- Part II: Hydrological Sciences and Oceans & Atmosphere.
- Part III: Solar-Terrestrial, Planetary & Solar System Sciences.
- Part IV: Nonlinear Processes in Geophysics and Natural Hazards

Abstracts of symposia sponsored by two different Sections are included twice in the appropriate volumes, respectively. Participants that have registered at the full meeting rate will receive **one part** of their choice together with the registration material.

## Proceedings

### General Information

*Physics and Chemistry of the Earth* is the official EGS journal for the publication of contributions presented at the EGS General Assemblies in form of short but self-contained, refereed articles of 4-6 camera-ready pages for contributed and 10-12 camera-ready pages for solicited papers including figures and tables at no page or handling charges and 25 free off-prints for authors. Papers will be published in thematic issues, which will be made available to authors and EGS members at a special discount rate of 15,- Pounds Sterling per normal issue.

Solicited papers published in the conference proceedings may not be published elsewhere. Contributed papers, however, may be published in an extended form elsewhere.

**Attention: Only papers actually presented at the EGS conference and belonging to a Session for which the publication of proceedings is foreseen are eligible for publication in the proceedings journal!**

### Session Editors and Referees

The Conveners of the individual events decide by themselves on the publication of "proceedings" and nominate appropriate Editors, who will then be responsible for the evaluation of a set of about 5-10 papers each and who will appear as *Guest Editors* of their respective thematic issues. The Editors, in turn, nominate the Reviewers - two for each paper; thereby, Conveners, Co-Conveners, Editors, speakers and co workers in their own institutes may serve as referees, eventually also of several papers:

- Conveners are responsible to forward the names and coordinates of their Editors and
- Editors are responsible to forward the names and coordinates of their Referees

to the *PCE Editorial Office* either at the General Assembly or at the EGS Office, respectively.

### Call for Publication

Authors were informed by the EGS Office about the acceptance and schedule of their contributions submitted to a General Assembly. In addition, authors automatically received a notice regarding the publication of "proceedings" of their event:

- I. publication of "proceedings" for your event is foreseen, please deliver 4 copies of your manuscript to the *Editorial Office* at the conference
- II. publication of "proceedings" for your event will finally be decided at the meeting
- III. publication of "proceedings" for your event is not foreseen.

Detailed guidelines for the preparation of manuscripts were included on the reverse side of each letter.

Category I is chosen, if the Conveners have returned their questionnaire together with the names of editors by the deadline date. Category II is selected, if the Conveners have indicated the publication of proceeding, however have not returned their questionnaire together with the names of editors to the EGS Office in time. Finally Category III is taken, if the Conveners did not wish to publish proceedings for their session.

### Category I Procedure

Conveners and Editors mutually agree on which Editor will be responsible for which set of papers of their session. They then inform the *Editorial Office* at the meeting correspondingly, and each Editor receives his/her set of 3 copies of each paper, while the 4th copies of all papers are kept by the *Editorial Office* for reference purposes. Each Editor then distributes his/her copies to the Reviewers of his/her own choice, hereby each copy must be accompanied by the **Guidelines & Check-List for Reviewers** with his/her name and address included by himself/herself! Moreover, each Editor must reserve one copy of the **Editor's Report Form** for each paper, respectively.

In the case that an author has not delivered his/her manuscript at the meeting, he/she may do so within **max. 3 weeks after the meeting** by mailing 3 copies of the manuscript directly to the corresponding Editor and one copy to the EGS Office.

Each paper must carry its own personal manuscript number (MS-No.), which is included in the event programme on the left hand side of the corresponding author-and-title block.

### Category II/III Procedure

If during the assembly both the authors and the Conveners of a session come to the conclusion to publish "proceedings", the Conveners should nominate Editors and mutually decide with them which Editor will be responsible for which set of papers. The Conveners should then inform the *Editorial Office* at the meeting correspondingly and agree on the deadline for submission of manuscripts (in general 3-4 month after the meeting). The *Editorial Office* will then inform all session authors in writing and include the name and address of the Editor to whom manuscripts should be submitted, the manuscript number (MS-No.) as well as the guidelines for preparing manuscripts for PCE.

### Evaluation Procedure

Guidelines for Reviewers and Editors are included on the Check-Lists for Reviewers and on the Editor's Report forms, respectively.

Referees have to review their papers and to send their reports/corrected manuscripts together with the corresponding Check-Lists to their appropriate Editors before their deadline dates.

Editors have to evaluate their papers based on the referees' comments and on their own judgement and they have to send their reports together with the corresponding Editor's Report Form and the entire documents received by the reviewers to the EGS *Editorial Office* before their deadline dates.

The *Editorial Office* will contact the authors, forward the "Guidelines for Camera Ready Submission" and the "Additional Offprint/Thematic Issue Order Form", monitor the submission and the quality of camera ready manuscripts, compile the thematic issues, and forward all material to the publisher.

### EGS Journals

Following the tradition of other leading scientific organizations, the EGS expects that authors consider the Society's journals for the publication of their contribution to the EGS General Assembly in an extended form as a single manuscript or as part of a "special" issue.

All journal papers undergo rigorous peer review and careful copy-editing by competent colleagues prior to publication.

There are no page nor handling charges and reprints are, in general, free for authors in all EGS journals. Rapid publication and distribution worldwide, moderate library subscription rates and greatly reduced membership subscription rates are guaranteed.

#### *Annales Geophysicae (12 issues per year)*

The leading interdisciplinary, boundary-layer journal covering the physics and chemistry of the oceans, of the lower, middle and upper atmosphere of the Earth, of the Sun and of the interplanetary medium, as well as the marine boundary layer and the air-sea interface, the interface between the atmosphere and the biosphere, lithosphere, hydrosphere, ionosphere and magnetosphere and the interaction at solar-terrestrial boundary layers.

Please send your manuscript to the Editorial Office:

Mrs. Sylviane Perret  
Editorial Assistant AG  
CESR-CNRS-UPS  
B.P. 4346  
31029 Toulouse Cedex  
France

Tel.: +33-61-558370  
Fax: +33-61-556535  
anngeo@cesr.cnes.fr

#### *Climate Dynamics (8 issues per year)*

Welcomes papers containing original diagnostic, analytical or numerical modeling research on the structure and behavior of the atmosphere, oceans, cryosphere, biomass and land surface as interacting components of the dynamics of global climate as well as contributions focused on selected aspects of climate dynamics on particular scales of space or time.

Please send your manuscript to the EGS Editor:

Dr. Lydia Dümenil  
MPI für Meteorologie  
Bundesstr. 55  
20146 Hamburg  
Germany

Tel.: +49-40-41173-310  
Fax: +49-40-41173-366  
dumenil@dkrz.d400.de

**Geophysical Journal International** (12 issues per year)  
Covers all disciplines of the physics and chemistry of the solid earth.

Please send your manuscript to the EGS Editor:

Prof. Roberto Sabadini      Tel.: +39-2-2369-8400  
Dept. of Earth Sciences      Fax: +39-2-7490-588  
Section of Geophysics      bob@sabadini.geofisica.unimi.it  
Universita di Milano  
via L. Cicognara 7  
20129 Milano  
Italy

**Hydrology and Earth System Sciences** (4 issues per year)

For original research in hydrology, viewed as a geoscience, and on the interaction between hydrology and other physical, chemical and biological processes within the Earth System. Papers on theory and modelling, experiment or instrumentation in form of regular length articles, brief communications (letters) or commentary are welcome.

Please send your manuscript to the Managing Editor:

Dr. James S.G. McCulloch      Tel: +44-1865-407770  
Burcot Tower      Fax: +44-1865-407770  
Abingdon      jsgmhess@aol.com  
Oxon, OX14 3DJ  
United Kingdom

**Journal of Atmospheric Chemistry** (9 issues per year)

The key journal for the study of the chemistry of the Earth's atmosphere with emphasis on the region below about 100 km, including also topics related to meteorology, oceanography, soil science, biology and microbiology.

Please send your manuscript to:

Editorial Office      Tel.: +31-78-6392-146/203  
Kluwer Academic Publishers      Fax: +31-78-6391-254  
P.O. Box 17      ampdejong@wkap.nl  
3300 AA Dordrecht  
The Netherlands

**Journal of Geodynamics** (8 issues per year)

The interdisciplinary journal for solid earth research in geodetic, geophysical, geological and geochemical geodynamics, with special emphasis on the large scale processes.

Please send your manuscript to the EGS Chief Editor:

Prof. Dr. Wolfgang R. Jacoby      Tel.: +49-6131-393-223  
Department of Earth Sciences      Fax: +49-6131-394-769  
Johannes Gutenberg Universität  
Saarstr. 21      jacoby@mzdmza.zdv.uni-mainz.de  
55122 Mainz  
Germany

**Nonlinear Processes in Geophysics** (4 issues per year)

An interdisciplinary journal published jointly by the EGS and the AGU for the publication of original research involving nonlinear processes in geophysics in the broadest sense. Contributions from both dynamical system theorists as well as geophysicists applying nonlinear methods to fundamental problems in geosciences are welcome.

Please send your manuscript to:

EGS Office      Tel.: +49-5556-1440  
c/o NPG      Fax: +49-5556-4709  
Max-Planck-Str. 13      egs@copernicus.org  
37191 Katlenburg-Lindau  
Germany

**Planetary and Space Science** (12 issues per year)

The key journal for planetary and solar system research, covering cosmochemistry and the origin and evolution of the solar system; small bodies, dust and rings; terrestrial and outer planets and their satellites, including geology, mineralogy, geophysics and dating as well as the formation and dynamics of planetary atmospheres, ionospheres and magnetospheres and their interaction with the solar wind; exobiology and celestial mechanics.

Please send your manuscript to:

EGS Office      Tel.: +49-5556-1440  
c/o PSS      Fax: +49-5556-4709  
Max-Planck-Str. 13      egs@copernicus.org  
37191 Katlenburg-Lindau  
Germany

**Surveys in Geophysics** (6 issues per year)

Up to date summaries of research in all the disciplines covered by the Society. Subscribers are kept informed also of the subjects outside their own specialties.

Please send your manuscript to:

Editorial Office      Tel.: +31-78-6392-280/235  
Kluwer Academic Publishers      Fax: +31-78-6392-254  
P.O. Box 17      judy.bothof@wkap.nl  
3300 AA Dordrecht  
The Netherlands

**Tectonics** (6 issues per year)

Includes papers on the deformation of the crust, including mountain building, rifting, seismotectonics, movements of terranes, and plate interactions, as well as contributions in the areas of analytical, synthetic and integrative tectonics.

Please send your manuscript to:

EGS Office      Tel.: +49-5556-1440  
c/o Tectonics      Fax: +49-5556-4709  
Max-Planck-Str. 13      egs@copernicus.org  
37191 Katlenburg-Lindau  
Germany



# Physics and Chemistry of the Earth

## Aims and Scope

*Physics and Chemistry of the Earth (PCE)* is an international interdisciplinary journal for fast publication of collections of short, but self-contained, refereed communications in geology, geochemistry, geophysics, hydrology, oceanography and atmospheric, planetary and space sciences in separate thematic issues. The collections may include papers presented at scientific meetings (*proceedings*) or articles on a well defined topic compiled by individual editors or organizations (*special publication*). *Physics and Chemistry of the Earth* intends to fill the lacuna between the publication of "abstracts" and of "extended articles", respectively. Publication in *Physics and Chemistry of the Earth* does not depend on any kind of sponsorship by the European Geophysical Society.

## Editorial Policy

Organizers of events or of special publications are invited to consider *Physics and Chemistry of the Earth (PCE)* for the publication of communications concentrating on new theoretical or observational results or instrumental techniques in the form of short, but self-contained, refereed articles with the following features:

- no costs for the organizer
- appointment of guest editors by the organizer, subject to approval by the PCE Editorial Board
- appointment of reviewers by the guest editors and organizers
- assistance of editors and authors by a professional PCE Editorial Office
- detailed guidelines and LaTeX macros for final camera ready submission
- publication within less than 6 months after submission of all accepted articles in camera ready form
- no page or handling charges for authors
- 25 free offprints for authors; additional offprints at special rates can be ordered when submitting the camera ready manuscript
- free inclusion of half-tone illustrations and US\$ 576,- per page for colour illustrations
- inclusion of all articles in a separate thematic issue, which may be purchased by authors, referees, event participants and EGS Members at the special rate of GBP 15,- per standard issue (which may even be included in the event registration fee); editors and guest editors will receive complimentary copies
- publication in an internationally respected scientific journal abstracted/indexed in Chemical Abstracts/INSPEC, with 8 issues for 1997 at an annual subscription rate of NLG 169,- for EGS Members and a circulation of 49.8% (North America), 28.9% (Europe), 17.0% (Australia and Asia) and 4.3% (Middle East, Africa and South America).

## Editors

### Editorial Office

**A.K. Richter (Executive Editor)**  
**B. Rauchalles (Editorial Assistant)**  
EGS Office  
Physics and Chemistry of the Earth  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany  
Tel: +49-5556-1440  
Fax: +49-5556-4709  
E-mail: EGS@COPERNICUS.ORG  
<http://www.copernicus.org/EGS/EGS.html>

### Editors

**N. Balling**  
Solid Earth Geophysics (SE)  
University of Aarhus  
Denmark

**H.-P. Plag**  
Geodesy (G)  
Universität Kiel  
Germany

**H.H.G. Savenije**  
Hydrological Sciences (HS)  
IHE Delft  
The Netherlands

**J.A. Johnson**  
Oceans and Atmosphere (OA)  
University of East Anglia  
Norwich, UK

**P. Fabian**  
Solar-Terrestrial Sciences (ST)  
Universität München  
Freising-Weihenstephan  
Germany

**F.W. Taylor**  
Planetary and Solar System Sciences (PS)  
University of Oxford  
Oxford, UK

**P.L. Read**  
Nonlinear Processes in Geophysics (NP)  
University of Oxford  
Oxford, UK

**S. Tinti**  
Natural Hazards (NH)  
University of Bologna  
Italy



## **Guidelines for Editors**

Dear Editor,

Thank you for serving as an Editor for the enclosed manuscript for which you have received 3 copies together with one copy of the Editor's Report form and two copies of the Check-List for Reviewers.

Please check, first of all, whether the Manuscript Number (MS-No.), the title and the name(s) of the author(s) have been correctly entered on these 3 forms. Second, please include the deadline date (in consultation with the Organizer of the event/special publication) in your Editor's Report form by which you will have submitted the results of your final evaluation to the Editorial Office; in general, this should not be later than a maximum of 3 months after you have received the manuscript. Third, please subtract the time you will need to evaluate the paper based on the reviewers' comments (max. 1 month) and include the (earlier) deadline date for the reviewing procedure for the referees on the two Check-Lists for Reviewers; reviewers must submit their comments before this date to you, their Editor; when necessary, remind your reviewer(s) accordingly.

Please select now two appropriate independent reviewers and provide them with their copies of the manuscript and the Check-List, respectively. If you will serve as one of the reviewers, we invite you to make comments for the authors on separate sheets and/or on the manuscripts. If you wish to consult colleagues of your laboratory about these papers, we trust that the authors' interests will be respected. Your name will be communicated to the publisher for inclusion as "Guest Editor" in the special issue. As a guideline, each paper should be short but self-contained, concentrating on new results or experimental techniques or theories.

Once the reviewers of the manuscript have been selected, you are kindly asked to include this information into the "List of Reviewers". Please forward this list as soon as possible to the Editorial Office for filing and tracking purposes. You may also return this form after you have included all papers that will be evaluated by you.

After you have studied the manuscript and the report(s) of the reviewer(s), please decide about the suitability of the manuscript for publication in the special issue according to one of the following categories:

- I. In principle, the paper is acceptable and the author(s) may submit it in camera ready form directly to the Editorial Office
- II. You would like to see the author act on the comments of the reviewer(s) and of yourself first, before you make a final decision. Please inform the author by using the form "Request for Revision", accept the revised manuscript and decide as included in the Editor's Report form. A maximum of 1 additional month is allowed for this additional procedure (minor revision).
- III. The manuscript needs a major revision and must be reviewed again. In general, manuscripts in this category will not be included in the special issue but rather in a later general one in order not to delay the publication of the special issue.
- IV. The manuscript is not acceptable.

Please forward all forms and items regarding the evaluation of the manuscript to the Editorial Office as soon as possible but by the deadline date at the latest. The Editorial Office will contact the author(s) and monitor the submission of the camera ready or substantially revised manuscript. Manuscripts that have not been reviewed by at least two independent persons, or that are delivered after their evaluation to the Editorial Office much later than by the deadline date, will not be included in the special thematic issue but rather in a later general one. This will also hold for papers for which authors extend the deadline for camera ready submission substantially by more than 1 month. Editors will be informed accordingly by the Editorial Office.

Finally, I would like to thank you very much for your assistance which is essential in producing a journal of high standard. In recognition of your work you will receive a complimentary copy of the special issue.

Yours sincerely,

Arne K. Richter  
Executive Editor



## Editor's Report

Editorial Office  
Physics and Chemistry of the Earth  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany  
Fax: +49-5556-4709

Meeting:  
MS-No.:  
Title:  
Author(s):

Please forward appropriate items together with this completed editor's report and the report(s) and check-lists of the reviewer(s) you received to the Editorial Office by the deadline date .....

### 1. Editor's Suggestions to the Author *(please mark accordingly)*

- ☐ on (a) separate sheet(s) ☐ in the manuscript

### 2. Evaluation

After having studied the manuscript myself and the report(s) of the reviewer(s)/the revised version of the manuscript, I conclude as follows:

- ☐ The manuscript is acceptable as it is, and the author may submit it directly in camera-ready form.
- ☐ The manuscript is acceptable with a few corrections, and the author may submit the corrected version directly in camera-ready form.
- ☐ The manuscript needs some revision, however the author may submit the revised manuscript directly in camera-ready form.
- ☐ The manuscript needed some revision and I contacted the author to submit a revised manuscript for final approval:
- ☐ The enclosed revised manuscript is now acceptable as it is,
- ☐ The enclosed revised manuscript is acceptable with a few corrections in accordance to my attached comments,
- and the author may submit the revised (and corrected) version directly in camera-ready form.
- ☐ The manuscript needs major revision and must be reviewed again.
- ☐ In order not to delay the publication of the special issue, the paper should be included in a later general issue.
- ☐ The paper should be included in the special issue, if the author is able to submit the revised version within 1 month.
- ☐ The manuscript is not acceptable in its present form.

Date: ..... Name/Signature: .....



## **Guidelines for Reviewers**

Dear Referee,

Thank you for serving as a reviewer for the enclosed manuscript, which you have received together with the Check-List for Reviewers from the Meeting Organizer/Editor or the Organizer/Editor of a Special Publication of the above journal.

Please check, first of all, whether the Manuscript Number (MS-No.), the name and address of the Editor to whom your report must be sent, and the deadline date before which you must deliver your report to your Editor have been correctly inserted on your Check-List on the reserve side.

We would appreciate if you could give your Editor your opinion as to the suitability of the manuscript for publication in the journal *Physics and Chemistry of the Earth*. For each paper separately a check list is on the reverse side to help you in this critical evaluation.

We invite you to make comments for the authors on separate sheets and/or on the manuscripts. If you wish to consult colleagues of your laboratory about the paper, we trust that the authors' interests are respected. Your name will not be communicated to the authors. As a guideline, each paper should be short but self-contained, concentrating on new results or experimental techniques or theories.

Please send the completed check list and your report to your Editor before the deadline date. He/She will evaluate each paper based on your and on his/her own opinion and will then inform the Editorial Office correspondingly. Manuscripts that have not been reviewed by at least two independent persons, or that are delivered too late, will not be considered for publication in the special issue but rather in a later general one.

If you are neither an author nor an EGS member we would like to offer the special issue for which you have served as a reviewer at a reduced subscription rate. Please contact the Editorial Office if you wish to purchase a copy.

Thank you very much for your advice which is an essential ingredient in producing a journal of high standard.

Yours sincerely,

Dr. Arne K. Richter  
Executive Editor



## Check-List for Reviewers

Name & Address of Editor:

Meeting:

MS-No. :

Title :

Author(s):

Please forward appropriate items together with this completed check-list to the Editor before .....

### 1. General Information *(please mark accordingly)*

Question	Yes	No
Does the paper contain new data or new ideas or both of them?		
Are these up to international standards?		
Is the presentation clear?		
Does the author reach substantial conclusions?		
Is the length of the paper adequate?		
Is the language fluent and precise?		
Are the title and the abstract pertinent and understandable?		
Is the size of each figure adequate to the quantity of data it contains?		
Does the author give proper credit to related work and does he/she indicate clearly his/her own contribution?		

### 2. Reviewer's Suggestions to the Author *(please mark accordingly)*

☐ on (a) separate sheet(s)

☐ in the manuscript

### 3. Recommendation to the Editor *(please mark appropriate item)*

- ☐ The manuscript is acceptable as it is.
- ☐ The manuscript is acceptable with a few corrections.
- ☐ The manuscript will be acceptable after (some) revision.
- ☐ The manuscript may become acceptable after major revision and must be reviewed again;
  - ☐ I would be willing to review the paper again.
  - ☐ I would not be willing to review the paper again.
- ☐ The manuscript is not acceptable.

Date: ..... Name/Signature:.....



To:

From:

.....  
.....  
.....  
.....  
.....

## Request for Revision

Dear Colleague,

Please find enclosed the report(s) of the reviewer(s) of your contribution

MS-No.: ..... Author(s): .....

Short Title: .....

A revision along the line(s) of the referees' comments is required prior to publication.

Please revise your manuscript accordingly and submit **two copies** within the **next 4 weeks** after the receipt of this information to the address shown above on the right-hand side. After the revised manuscript has been reviewed, you will be informed about its final acceptance for publication by the Editorial Office.

In order to guarantee the publication of the entire set of articles in one special issue in due time, we kindly ask you to keep the deadline.

Thank you for your cooperation.

Yours sincerely,

Date .....

Signature .....



# REPRINTS SERVICE

In response to increasing demand we offer a reprints service in respect to all articles published in Elsevier Science Ltd journals.

Whether you are a contributor or a company we can reprint any article and tailor it to your needs - incorporating advertisements, company logos or special covers to your specification.

Reprints can be used by you to keep your colleagues informed about your work or educate customers and staff about scientific or technical advances in subjects relevant to your business.

*For a quotation on your reprint requirements, please contact:*

THE REPRINTS DEPARTMENT,  
ELSEVIER SCIENCE LIMITED,  
THE BOULEVARD,  
LANGFORD LANE, KIDLINGTON,  
OXFORD OX5 1GB.

TELEPHONE: +44 (0) 1865 843520  
FAX: +44 (0) 1865 843922



## **Guidelines for Preparing Manuscripts in Camera-Ready Format for *Physics and Chemistry of the Earth***

These guidelines as well as the guidelines for preparing manuscripts for the pre-publication review can be obtained via WWW or from the Editorial Office.

### **I) Guidelines for PC Users**

#### **Printing requirements**

Only single-sided laser printouts (or printouts of similar quality) of 300 dpi and better with uniform blackness of the lettering are acceptable. The printing area is 17.7 cm (width) x 24.1 cm (height) and with two columns of 8.5 cm width each and a space of 0.7 cm between the columns.

Print out your text on a normal white (A4 or American size) paper or, when necessary, cut-and-paste it on special paper which can be provided by the Editorial Office, to fit inside the blue outline indicating the printing area.

Number all pages consecutively outside the printing area.

#### **General typing requirements**

Typeface:	Times (Roman)
Size of type in text:	10-point justified
Space between lines (leading):	2 points
Typesize for small print (tables, legends, footnotes, acknowledgements and references):	8-point justified
Space between lines (leading):	2 points
Section Headings (incl. Introduction, Results, number, Discussions & Summary):	numbered, 10-point boldface incl. free-standing, 1 blank line afterwards
Section Sub-Headings & Sub-Sub-Headings:	Sub-numbered, 10-point justified incl. number(s)

Space between separate sections:

2 blank lines (except between Abstract and Introduction)

Space between separate paragraphs:

none; text of first paragraph begins flush left; all following paragraphs are indented 2 space (10 points).

#### **Title page**

The title page should contain the title of the article, the names of the authors and their addresses, as well as the name of the author to whom offprint requests should be sent to. This information should be typed on a separate sheet of paper.

#### **First page of the article**

The first printed line in both columns should begin 7.6 cm below the upper margin, to allow for enough space for the title and the author and affiliation block, which is described below.

At the bottom of the first column make an 3.4. cm long line and write directly below this line the following information:

Correspondence to: Name, with, preferentially, "Correspondence to:" in 10 point Times Italic and "Name", the name of the author to whom offprint requests should be sent, in 10 point Times Roman. The complete information must be included in the overall vertical dimension of the first column of 16.5 cm.

#### **Title-Author-Affiliation block**

The printing area for this block at the top of the first page of the article is 17.7 cm (width) x 7.6 cm (height) and across both columns. All lines must be set flush left.

#### **TITLE:**

The title should be typed in 17 point with 40 point leading (space to the upper margin) or 17/57 point for the first line and with 5 point leading (space to previous title line(s)) or 17/22 point for all following lines. Except for any proper nouns, only the first word of the title shall be capitalized.



#### AUTHOR(S):

Authors must be listed successively one after another as A. First, or A. First and B. Second or A. First, B. Second, and C. Third etc. This text must be typed in 10 point Times Bold with 8 point leading (space to the title block) or 10/18 point for the first line and 2 point leading (space to the previous authors' line) or 10/12 point for all following lines. If there are more than one affiliation, footnotes marked by raised 8 points Times Roman numbers 1, 2, 3 etc. must be added at the end of each author's name, respectively, whereby the footnote "1" should be reserved for the first author. In case an author's name is associated with two or more footnotes (affiliations), these footnotes must be separated by a comma in the size and type of the footnotes.

#### AFFILIATIONS(S):

Type all affiliations (names and postal addresses of corresponding institutes or organizations) or information directly associated with authors (e.g., "On leave from" or "Postal address" etc.) in 10 point Times Roman with 6 point leading (space to author's block) or 10/16 point for the first line and 2 point leading (space to previous affiliation lines) or 10/12 point for all following lines. If there are more than one affiliation or "information", each new affiliation/information should begin with a new line, and the corresponding footnotes marked by raised 8 point Times Roman numbers must appear at the beginning of each respective affiliation/information line. The

various affiliation lines must appear in the natural order: 1, 2, 3 etc. below of one another.

#### MS INFORMATION:

Together with the letter of acceptance for publication the author to whom all correspondence should be addressed will receive some general information regarding the manuscript, such as the dates of receipt, revision and acceptance. At a distance of 2 blank lines (2 x 12 point) from the bottom of the title block the following information must be included in 10 point Times Roman: Received ?? - (Revised ??) - Accepted ??, where the text to be inserted in place of ?? will be provided by the Editorial Office or the Editor(s).

#### REMARK:

Authors who have difficulties in completing the Title-Author-Affiliation block should leave this space empty. This block will then be typeset and added by the printing office with the information provided in the Title Page.

#### Structuring the Text

Please, structure the article as follows: Abstract, Introduction, Sections incl. Conclusions, Discussions or Summary, Appendices, Acknowledgements and References.

### Example

**Abstract.** It has recently become a matter of discussion among geologists and geophysicists whether the topographic structure of the sea floor can be described as a fractal process, using the concepts of self-similarity and self-affinity.

#### 1 Introduction

Pictures of fractals have become popular as modern art (Peitgen and Richter, 1986).

Long time ago, Peano (1890) and Fricke and Klein (1897) described measures and sets now called "fractals", while Besicovitch extended the definition of fractal dimension to non-integer and non-standard shapes (cf. Mandelbrot, 1983).

Recently it has become a subject of discussion whether the ocean sea floor can be described as a fractal process. In this context it has been suggested that self-similar or self-affine fractal processes could be applied (Goff et al., 1991)

### Description

**Abstract.** 10-point boldface incl. period. Text follows immediately after period in 10-point type with 2 points space between lines (leadings). After the abstract allow one blank line. Then make an 8.5 cm long line and allow 2 more blank lines.

**Introduction.** Number, one space indent and heading all in 10-point boldface and free-standing. 1 blank line and then the text of the first paragraph flush left 10-points with 2 points between lines. All following paragraphs are indented 2 spaces (10 points). Allow 2 blank lines after the introduction.

**References.** in the text are cited as follows: Miller (1986), Miller and Anderson (1987) or Miller et al. (1989), if there are more than two authors. If name(s) and date(s) are enclosed in parentheses, references are cited as follows: (Miller, 1986), (Miller, 1986; Miller et al., 1989) with multiple citations separated by semicolon.

**Sections.** All section headings incl. "Results", "Discussions" or "Summary" must be numbered: number, one space indent and heading all in 10-point boldface and free-standing; similar for sub-headings and sub-sub-headings but not boldface.

Example

2 Mathematical Background

2.1 The Transport Equations

2.1.1 The Standard Set

$$u_t + 6uu_x + u_{xxx} + \epsilon[N_t + 6(Nu)_x + N_{xxx} - u_{xt} - (u_x^2)_x - 2(uu_{xx})_x] +$$
$$-\epsilon^2[N_{xt} + 2(uN)_{xx} - 2(u_x N_x)_x - 3(N^2)_x] +$$
$$-\epsilon^3[(N_x^2)_x + 2(NN_{xx})_x]$$
(68)

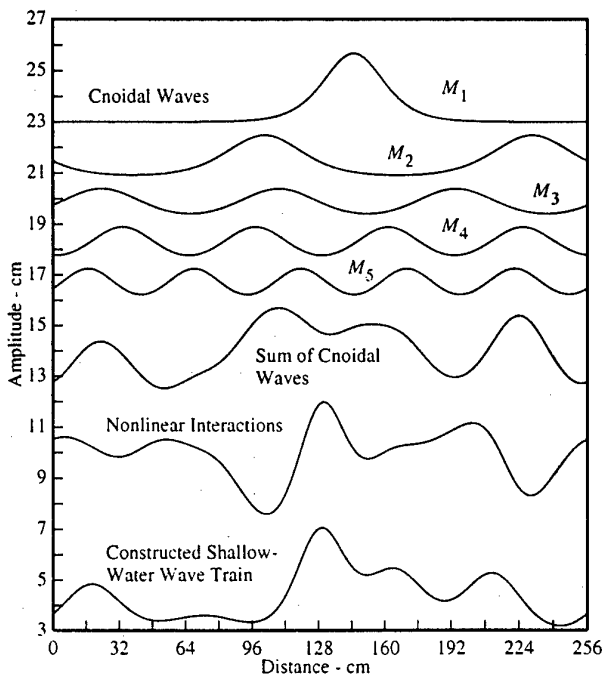


Fig. 3. The cnoidal wave components in the spectrum of Fig. 2 (vertically ordered from small to large wave numbers) are shown, together with the sum of the cnoidal waves, the nonlinear interactions and the synthesized five-component wave train. The linear superposition of the cnoidal waves plus interactions yields the constructed wave train at the bottom of the panel.

	$u_{5x}$	$uu_{xxx}$	$u_x u_{xx}$	$u^2 u_x$
Kodama	1	10	20	30
CH	1	4	14	0
W2	1	~5.3	~12.1	~-3.2

Table 1. Comparison of the constant coefficients for each  $O(\epsilon)$  term in the Kodama (4), the deregularized CH (7) and the W2 (3b) equations.

Description

After each freestanding heading, sub-heading or sub-sub-heading there is one blank line. The text of the first paragraph begins flush left on a new line. All following paragraphs are indented 2 spaces (10 points) without any blank line to the previous one. Allow 2 blank lines after each section to the heading of the following one.

**Mathematical Symbols and Formulae.** All characters should be typed. Avoid confusion between similar looking symbols, letters and numbers or Greek and Roman letters. Equations should be numbered by arabic numerals in parentheses on the right-hand side (flush right). In general, equations should be included in one column, flush left and should, if too long, split accordingly.

**Units.** The metric system is mandatory and, wherever possible, SI units should be used.

**Figures.** All figures, whether diagrams, graphs or photographs (black and white, colour or half-tone) should be of high quality, trimmed at right angles and glued in the laser printout at the appropriate location in the text, preferentially at the top of a column/page. Figures incl. labelling should fit in one column (8.5 cm in width) but may extend up to 17.7 cm in width (both columns) or may even take a whole page 17.7 x 24.1 cm. Figures and legends must be flush left. Figure legends (8-point type with 2 points space between lines) are to be placed under the figures. If a figure is wider than 8.5 cm but smaller than 12.5 cm in width the legend should be placed on the right-hand side next to the figure. Figures must be numbered and abbreviated as Fig.1., Fig.2. etc. in boldface. The text of the caption should follow immediately. Allow 2 blank lines after each figure before the text is continued.

**Tables.** Tables should be handled like figures. The table caption should be numbered as Table 1., Table 2. etc. boldface. The text of the caption should follow immediately. Table captions appear above the table. Tables incl. caption should be prepared in 8-point type without vertical lines.

**Footnotes.** Footnotes should be avoided. However, if present they should be numbered consecutively and prepared in 8-point type. Footnotes to tables should be marked by raised lower-case letters.

**Appendices.** Appendices should be labeled by capital letters, e.g. Appendix A, Appendix B etc. and treated like independent sections otherwise. Equations, figures and tables are numbered consecutively as (A1), Fig. B1. or Table C5., respectively.

## Example

*Acknowledgement.* On behalf of the editors and of the Society we would like to thank all colleagues submitting their manuscripts to *Physics and Chemistry of the Earth* for publication.

## References

- Peitgen, H.O. and Richter, P.H. (Eds.), *The beauty of fractals*, Springer, Berlin Heidelberg New York, 1986.  
Mandelbrot, B.B., Self-affine fractals and fractal dimension, *Physica Scripta*, 32, 257-260, 1985.  
Goff, J.A. Jordan, T.H., Edwards, M.H., and Fornari, D.J., Comparison of a stochastic seafloor model with Sea MARC II bathymetry and Sea Beam data near the East Pacific Rise 13°-15°N, *J. Geophys. Res.*, 96, 3867-3885, 1991.

## Description

**Acknowledgements.** This section should be prepared in 8-point type with, preferentially, "*Acknowledgement(s)*" in italic. The text follows immediately after the period. Allow 2 blank lines after this section.

**References.** Heading in 10-point type boldface and freestanding; one blank line afterwards. References in 8-point type. If possible, book titles and titles of journals incl. volume numbers in italic. The first line of each individual reference begins flush left on a new line; subsequent lines are indented 2 spaces (8 points). All authors' names and initials have to be typed in reverse order, i.e., Mandelbrot, B.B.; if there are more than two authors, please insert a comma before "and"; no comma, however, if there are only two authors.

## Writing Style

Neither headings, sub-headings, figure legends, table captions nor any other word in the text should be capitalized except for the opening letter, names and certain abbreviations. Only when used with numbers, the following abbreviations and expressions should be capitalized: Fig(s).1, Table(s) 2, Sect(s).5, Chap(s).10, Appendix A, Paper II, Theorem 5, Eq(s).(9) etc.

If abbreviations of names or concepts are used throughout the article, they should be defined at first occurrence.

The following words should be abbreviated when they appear in the running text followed by a number unless they come at the beginning of a sentence: Eq., Fig., Sect., Chap.; e.g. "The results is depicted in Fig.15. Figure 3 reveals that ...".

The respective numbers of equations should occur in parentheses, e.g., Eq.(9). Thus, e.g., "We have shown in Eq.(9) that ... Equation (9) indicates that ...".

## Characters

Complex numbers: C  
real numbers: R  
natural numbers: N  
rational numbers: Q  
integer numbers: Z

## II) LaTeX Macro Package

There is a official LaTeX package available for formatting your LaTeX manuscript in camera-ready form. The package contains the following files:

egs_man.tex	= An instruction manual, as LaTeX file
egs.bst	= The bibliographic style file for BibTex
egs.sty	= The LaTeX 2.09 style file, with modifications to article style
egs.cls	= The LaTeX2e class file, with modifications to article class
readme.egs	= General Information
sample.bib	= A sample bibliography database for the sample text
samp_egs.tex	= A sample text file

Process egs\_man.tex under LaTeX (2.09 or 2e) to obtain the instruction manual for complete details on usage. The demonstration article in samp\_egs.tex illustrates most of the features.

This package can be received via Internet from WWW; otherwise please contact the Editorial Office.

## III) Guidelines for typewriter-prepared manuscripts

If you wish to receive these Guidelines please contact the Editorial Office.

## IV) Submission and general contact

If not stated otherwise, please submit your hard copy, camera-ready manuscript without folding the paper to/contact:

EGS Editorial Office	Tel: +49-5556-1440
Max-Planck-Str. 13	Fax: +49-5556-4709
37191 Katlenburg-Lindau	EGS@COPERNICUS.ORG
Germany	<a href="http://www.copernicus.org/EGS/EGS.html">http://www.copernicus.org/EGS/EGS.html</a>

# New New New New

## Hydrology and Earth System Sciences

ISSN 1027-5606

### Scope

*Hydrology and Earth System Sciences* (HESS) is an international and interdisciplinary journal for the publication of original research in hydrology, viewed as a separate geoscience alongside the atmospheric, ocean and solid earth sciences. HESS serves not only the community of scientific hydrologists, but all geoscientists who wish to publish new findings on the interactions between hydrology and other physical, chemical and biological processes within the Earth System. Papers on theory and modelling, experiment or instrumentation, in the following areas will be particularly welcome :

- Hydrology and the Earth's Crust
- Hydrology and Land Forms
- Hydrology and Climate Processes
- Hydrology and Weather Processes
- Hydrology and Surface Processes
- Hydrology and Soil Processes
- Hydrology and Living Communities
- Hydrology and Chemical Processes
- Hydrology and Applied Mathematics.

The journal will maintain sections for regular length articles, brief communications (letters) and commentary.

### Publication and Submission Policy

- Rigorous peer review by at least two independent, competent colleagues prior to publication.
- No page or handling charges for authors.
- 25 free offprints for authors and additional offprints at special rates.
- Colour reproductions at special cost-price rates.
- Moderate library subscription rates.
- Greatly reduced subscription rates for members of the European Geophysical Society.
- Four copies of the manuscript should be mailed to the Managing Editor.

### Managing Editor

**J.S.G. McCulloch**  
Water Resource Systems  
Research Laboratory  
Department of Civil Engineering  
University of Newcastle upon Tyne  
Newcastle upon Tyne NE1 7RU  
United Kingdom

Tel: +44-1865-407770  
Fax: +44-1865-407770  
rmccull585@aol.com

### Scientific Editors

**E. Custodio Gimena** (Madrid), **R. Rosso** (Milano), **P. Kabat** (Wageningen), **E. Foufoula Georgiou** (Minneapolis), **P.E. O'Connell** (Newcastle-upon-Tyne), **P. German** (Bern), **J.P. O'Kane** (Cork) and **C. Neal** (Wallingford)

### Subscription Rates

Volume 2 (4 issues) will appear in 1998. The subscription rates incl. handling and surface mail charges are

- GBP 150,-/DEM 420,- for institutions
- GBP 50,-/DEM 140,- for EGS members
- Airmail surcharge for outside Europe GBP 6,-/DEM 16,-
- GBP 10,-/DEM 28,- for a normal thematic issue

Please send orders & payments to:

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
egs@copernicus.org

### Full details via Internet

<http://www.copernicus.org/EGS/EGS.html>

### Order Form

- ☐ I will enclose a cheque
- ☐ Please bill me
- ☐ Please charge my credit card
- ☐ Eurocard/Mastercard/Access
- ☐ VISA
- ☐ American Express

Number: \_\_\_\_\_

Valid until: \_\_\_\_\_

Cardholder: \_\_\_\_\_

### Hydrology and Earth System Sciences ISSN 1027-5606

Please enter my subscription from the year 19 \_\_\_\_\_

☐ at the Annual Institutional Subscription Rate of \_\_\_\_\_

☐ at the Annual Membership Subscription Rate of \_\_\_\_\_

Name & Address: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_



*The Father of Climate Modelling  
and of the Astronomical Theory of  
Palaeoclimates*

**Milutin Milanković**

An extract from his *autobiography* compiled by his son, Vasko, describing in detail the way his father derived his mathematical theory of the glacial and inter-glacial cycles, of the Earth's rotation and of plate tectonics as well as his exchange of ideas with the other pioneering geophysicists of his time, such as Köppen, Brückner, Zeuner, Wegener, and others.

With a *preface* by André Berger explaining the historical background for the astronomical theory of palaeo-climates and the pioneering contribution of Milanković.

A *book*, leather bound, published in English, 181 pages, 51 photographs and figures and 12 facsimiles and their translations.

**Member Price (\*):**

45,- DEM / 35,- USD / 22,- GBP / 175,- FRF

(\*) for members of any national or international scientific society/union.

**List Price:**

60,- DEM / 46,- USD / 29,- GBP / 230,- FRF

**Payment by *cheque***

(in the currency of the country of the bank on which the cheque is actually drawn)

**Payment by *credit card***

(VISA, American Express, Eurocard/Mastercard; processed in DM at most favourable conversion rates)

Orders should be sent by e-mail, telefax or mail to:

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
EGS@COPERNICUS.ORG  
<http://www.copernicus.org/EGS/EGS.html>

**Order Form**

**Milutin Milanković**  
**ISBN 3-9804862-0-6**

- ☐ Please bill me
- ☐ I will enclose a cheque
- ☐ Please charge the credit card
- ☐ Eurocard/Mastercard/Access
- ☐ VISA
- ☐ American Express

I hereby order

\_\_\_ copies at the Member Price/ \_\_\_ copies at the List Price

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Number: \_\_\_\_\_

Valid until: \_\_\_\_\_

Date: \_\_\_\_\_

Cardholder: \_\_\_\_\_

Signature: \_\_\_\_\_

# Now Jointly with AGU

## Nonlinear Processes in Geophysics

Since 1994

ISSN 1023-5809

### Scope

An international, interdisciplinary journal for the publication of original research involving nonlinear processes in geophysics in the broadest sense.

### Publication Policy

- Rigorous peer review by at least two independent, competent colleagues prior to publication.
- Express publication, if accepted papers are delivered in camera ready form by the author(s). Appropriate detailed guidelines or LaTeX macros are provided by the Editorial Office.
- No page or handling charges for authors.
- 25 free offprints for authors and additional offprints at special rates.
- Colour reproductions at special cost-price rates for authors.
- Moderate library subscription rates.
- Greatly reduced subscription rates for members of the American Geophysical Union and of the European Geophysical Society.

### 1998 Subscription Rates

Volume 5 (4 issues) will appear in 1998 at the following institutional and EGS and AGU membership subscription rates (including handling and surface mail charges):

Regular Members	DEM 96,- / US\$ 67,-
Student Members	DEM 56,- / US\$ 39,-
Retired Scientists	DEM 56,- / US\$ 39,-
Institutional	DEM 198,- / US\$ 135,-

Air Mail Surcharge (outside Europe)	DEM 16,- / US\$ 12,-
--	----------------------

Please send your order to the EGS Office.

### Editorial Structure

#### Executive Editor

A.R. Osborne (Torino, Italy)

#### Editors

R.L. Bras (Cambridge, USA), A.D. Kirwan (Norfolk, USA), L. Knopoff (Los Angeles, USA), E. Marsch (Katlenburg-Lindau, Germany), V.I. Shrira (Moscow, Russia)

#### Editorial Office

B. Rauchalles

EGS Office

Max-Planck-Str. 13

37191 Katlenburg-Lindau

Germany

Tel: +49-5556-1440

Fax: +49-5556-4709

EGS@COPERNICUS.ORG

<http://www.copernicus.org/EGS/EGS.html>

### Special Issues

- ☐ Conference on Fractals, Chaos and Predictability in Oceanography and Meteorology, Volume 1, Number 1, 1994.
- ☐ Conference on Nonlinear Variability in Geophysics: Scaling and Multifractal Processes, Volume 1, Number 2/3, 1994.
- ☐ 20th International Conference on Mathematical Geophysics: Complex Space Time Geophysical Structures, Volume 2, Number 3/4, 1995.
- ☐ MFGA-IDT2 workshop: Astrophysical and geophysical fluid mechanics: the impact of data on turbulence theories, Volume 3, Number 4, 1996.

Single Issue:

DEM 20,-/USD 15,-

Double Issue:

DEM 40,-/USD 30,-

### Order Form

### Nonlinear Processes in Geophysics ISSN 1023-5809

Please enter my subscription from the year 19 \_\_\_\_\_

☐ at the Annual Institutional Subscription Rate of \_\_\_\_\_

☐ at the Annual Membership Subscription Rate of \_\_\_\_\_

Member of \_\_\_\_\_

I order \_\_\_\_\_ copies of the Special Issue(s)

☐ I will enclose a cheque

☐ Please bill me

☐ Please charge my credit card

☐ Eurocard/Mastercard/Access

☐ VISA

☐ American Express

Number: \_\_\_\_\_

Valid until: \_\_\_\_\_

Cardholder: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_



# Modern Ionospheric Science

H. Kohl, R. Rüster and K. Schlegel (Eds.)  
ISBN 3-9804862-1-4  
European Geophysical Society

A collection of sixteen articles on various aspects and 'hot topics' of ionospheric research, written by specialists in their respective fields. Useful as a textbook for students as well as for research scientists who wish to update their knowledge of new developments in ionospheric science.

560 pages  
Hardcover  
10 black-and-white and  
30 colour photographs

**Member Price: (\*)**  
80,- DEM / 65,- USD / 40,- GBP / 315,- FRF  
(\*) for members of any national or international scientific society/union

**List Price:**  
120,- DEM / 95,- USD / GBP 60,- / FRF 470,-

All prices include postage and handling.

Orders should be sent by e-mail, telefax or mail to:

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

*W.I. Axford, T. Hagfors*, 50 years of ionospheric research at the Max-Planck-Institut für Aeronomie  
*H. Rishbeth, H. Kohl, L.W. Barclay*, A history of ionospheric physics and radio communications  
*S.W.H. Cowley*, The auroral ionosphere and its coupling to the magnetosphere and solar wind  
*L. Thomas*, The coupling of the lower ionosphere with the mesosphere and lower thermosphere  
*H. Volland*, Electrodynamical coupling between neutral atmosphere and ionosphere  
*P.J.S. Williams*, Tides, atmospheric gravity waves and travelling disturbances in the ionosphere  
*R.W. Schunk, J.J. Soika*, Ionospheric Models  
*B.G. Fejer*, Natural ionospheric plasma waves  
*P. Stubbe*, The ionosphere as a plasma laboratory  
*A.W. Wernik*, Methods of data analysis for resolving nonlinear phenomena  
*R. Leitinger*, Tomography  
*N. Jakowski*, TEC monitoring by using satellite positioning systems  
*R.A. Greenwald*, The role of coherent radars in ionospheric and magnetospheric research  
*D.T. Farley*, Incoherent scatter radar probing  
*B.W. Reinisch*, Modern ionosondes  
*R.F. Pfaff*, In-situ measurement techniques for ionospheric research

Tel: +49-5556-1440  
Fax: +49-5556-4709  
EGS@COPERNICUS.ORG  
<http://www.copernicus.org/EGS/EGS.html>

## Order Form

- ☐ Please bill me  
☐ I will enclose a cheque  
☐ Please charge the credit card  
☐ Eurocard/Mastercard/Access  
☐ VISA  
☐ American Express

Number: \_\_\_\_\_

Valid until: \_\_\_\_\_

Cardholder: \_\_\_\_\_

## Modern Ionospheric Science ISBN 3-9804862-1-4

I hereby order

\_\_\_\_ copies at Member Price/ \_\_\_\_ copies at List Price

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

# tectonics

Bimonthly

A Joint Publication of the EGS and AGU.

*Tectonics* contains original and timely papers in analytical, synthetic, and integrative tectonics. Contributions address the structure and evolution of the terrestrial lithosphere with dominant emphasis on the continents. A rigorous peer-review process and timely processing of manuscripts ensures *Tectonics* to be highly regarded among scientists worldwide.

## Subscription Rates

AGU or EGS member \$81  
AGU or EGS student members \$41

## Shipping Outside U.S.

Surface \$18  
Airfreight \$43  
Airmail \$82

## Subscribe Today!

Online: <http://www.agu.org>  
E-Mail: [egs@copernicus.org](mailto:egs@copernicus.org)  
Voice: +49-5556-1440  
Fax: +49-5556-4709  
Mail: EGS - Orders  
Max-Planck Str. 13  
37191 Katlenburg-Lindau  
GERMANY

U.S. Office  
<http://www.agu.org>  
[orders@kosmos.agu.org](mailto:orders@kosmos.agu.org)  
+1-202-462-6900  
+1-202-328-0566  
AGU - Orders  
2000 Florida Ave., NW  
Washington, DC 20009  
USA

## Submit to *Tectonics* Today!

Five copies of double-spaced typescript should be submitted to the editor-in-chief or the European editor at the addresses provided below. Please enclose a list of five possible referees and their addresses, telephone, e-mail, and fax numbers to help guide the editor's choice. One set of figures must be suitable for reproduction. For details on style, contact an editor's assistant listed below or consult the last pages of a recent issue of *Tectonics*.

**Editor-in-Chief**  
David Scholl  
USGS/Stanford Univ.

**Submissions to:**  
AGU - Tectonics  
2000 Florida Ave., NW  
Washington, DC 20009  
USA

Voice: +1-703-462-6900  
Fax:: +1-703-462-2253

**Editor's Assistant**  
Bonnie Bright  
[bbright@kosmos.agu.org](mailto:bbright@kosmos.agu.org)

**European Editor**  
Adrian Pfiffner  
Univ. Bern

**Submissions to:**  
EGS - Tectonics  
Max-Planck Str. 13  
37191 Katlenburg-Lindau  
GERMANY

Voice: +49-5556-1440  
Fax:: +49-5556-4709

**Editor's Assistant**  
Bernd Rauchalles  
[egs@copernicus.org](mailto:egs@copernicus.org)

# tectonics

American Geophysical Union  
European Geophysical Society

<http://www.agu.org>

View the three most recent tables of contents, learn more about the editors, and submissions, or subscribe on the web.

Code: EGS



KARSTEN M. STORETVEDT

# Our Evolving Planet

## *Earth History in New Perspective*

Does the plate tectonic model represent a "quantum leap" in our understanding of the Earth as currently alleged? And will that model be a fruitful guide for the Earth sciences into the 21st Century? This book answers such questions with a definite no! The author's message is clear: something must be fundamentally wrong when an originally highly tentative model, having subsequently failed all critical tests, continues to be regarded as universally valid.

On this background the author launches a new Earth evolution model, a theory with much broader scope and greater explanatory power than its predecessors. In the new framework global tectonics becomes intimately linked to Earth's rotation, and based on well-known dynamical principles of rotating planetary bodies the whole of Earth history becomes a chain of interrelated phenomena. In all, the book urges for a highly needed change in the perception and evaluation of familiar data.

The author, Karsten M. Storetvedt, has held a chair in geophysics at the University of Bergen since 1973. He graduated in 1962, and received his doctorate at the University of Bergen in 1969 after post-graduate and pre-doctoral studies at the University of Newcastle-upon-Tyne, partly under the late Prof. S.K.Runcorn.

456 pages, 198 illustrations, format 17 x 24 cm, hardbound. Price NOK 585 (USD 80) plus postage. ISBN 82-419-0221-2

Order the book from your bookseller or directly from the publishers:

**ALMA MATER FORLAG, P.O. BOX 4213, Nygårdstangen, 5028 Bergen, Norway.**

Fax: 47-55 31 84 68, Tel: 47-55 58 31 78

---

### Order Form

I hereby order

----- copies of K.M. Storetvedt: Our Evolving Planet, at a price of NOK 585 plus postage.

----- I enclose a cheque

----- I wish to pay by Am Express/Visa/Diners/Mastercard/Eurocard (delete as necessary)

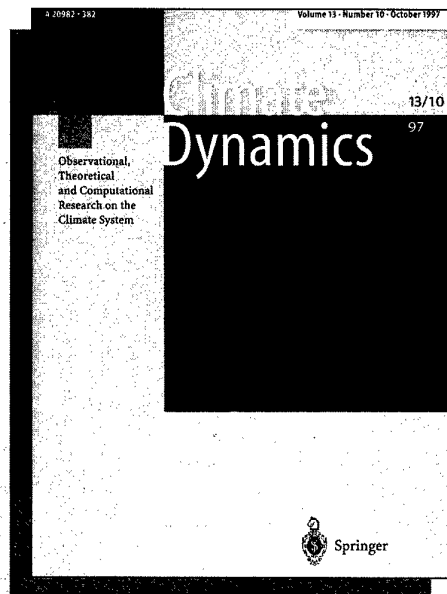
Card number: -----

Valid until:-----

Name and address of cardholder:

Signature:

# High-quality research



## Climate Dynamics

Observational Theoretical  
and Computational Research  
on the Climate System



Published in  
cooperation with the  
European Geophysical  
Society (EGS)

### Executive Editors:

W.L. Gates  
J.-C. Duplessy  
L. Dümenil



An international forum for the publication of research on all aspects of the dynamics of the global climate system. Topics cover original paleoclimatic, diagnostic, analytical or numerical modeling research on the structure and interaction between the atmosphere, oceans, cyrosphere, biomass and land surface. Also included are contributions focused on selected aspects of climate dynamics on particular scales of space or time as well as contributions emphasizing an integrated view of the physical and biogeochemical process governing climate and climate change.

### Subscription information for 1998:

Volume 14, 12 issues

DM 1798,-

For members of the EGS

DM 98,-

ISSN 0930-7575 Title No. 382

ISSN 1432-0894 electronic edition

### Members are requested to order through:

EGS Office, P.O. Box 49

D-37191 Katlenburg-Lindau FRG

### Please order from

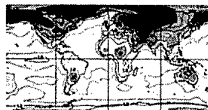
Springer-Verlag Berlin

Fax: + 49 / 30 / 8 27 87- 448

e-mail: [subscriptions@springer.de](mailto:subscriptions@springer.de)

or through your bookseller

Plus carriage charges. Price subject to change without notice.  
In EU countries the local VAT is effective. Errors and omissions excepted.



Springer

# Journal of Atmospheric Chemistry

*Published in cooperation with  
the European Geophysical Society (EGS)*

## Editors:

**Dieter H. Ehhalt**

*Institute for Atmospheric Chemistry, Forschungszentrum Jülich, Germany*

**Paul J. Crutzen**

*Max-Planck-Institute for Chemistry, Mainz, Germany*

**Brian A. Ridley**

*Atmospheric Chemistry Division, NCAR, Boulder, CO, USA*

**Robert J. Delmas (EGS Editor)**

*Laboratoire de Glaciologie et Géophysique de l'Environnement, St. Martin d'Hères, France*

The *Journal of Atmospheric Chemistry* is devoted to the study of the chemistry of the Earth's atmosphere, with emphasis on the region below about 100 km. The strongly interdisciplinary nature of atmospheric chemistry leads it to embrace many varied sciences, but the journal concentrates on the following topics:

- Observational, interpretative and modelling studies of the composition of air and precipitation and physiochemical processes in the Earth's atmosphere, excluding air problems of only local importance.
- The role of the atmosphere in biogeochemical cycles; the chemical interaction of ocean, land surface, biosphere with the atmosphere.
- Laboratory studies of the mechanics in homogeneous and heterogeneous transformation processes in the atmosphere.
- Descriptions of major advances in instrumentation developed for the measurement of atmospheric composition and chemical properties.

## Subscription Information:

**ISSN 0167-7764**

1998, Volumes 29-31 (9 issues)

Subscription Rate: NLG 1260.00/USD 646.50, including postage and handling.

*Special rate for EGS: NLG 260.00, including postage and handling.*

## ELECTRONIC AVAILABILITY AND ACCESS

In 1998 electronic access to a number of our journals is available free to institutions and their members that have a subscription to the hard copy of the 1998 volumes. Access is available via the following service providers:

Swets & Zeitlinger (Swetsnet)  
Blackwell's Information Services (Navigator)  
EBSCO (Ebsco Online)  
Dawson/Faxon (Information Quest)  
OCLC (ECO)

Please consult any of these service providers for information on which journals are available electronically and how to access them. You may also consult our homepage to find out which journals are available electronically.

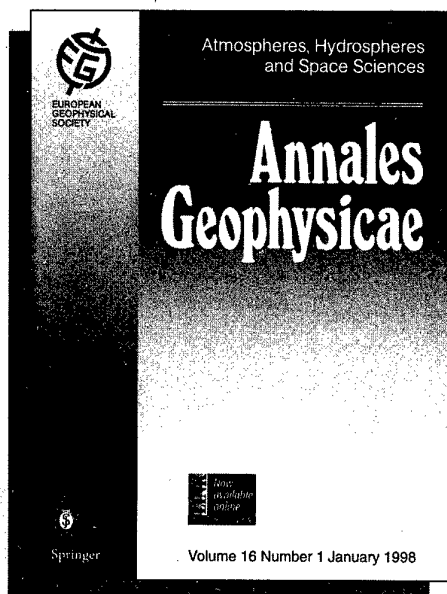
**P.O. Box 322, 3300 AH Dordrecht, The Netherlands  
P.O. Box 358, Accord Station, Hingham, MA 02018-0358, U.S.A.**

<http://www.wkap.nl>

**Kluwer  
academic  
publishers**



## Featuring "Letters section" for latest results



### **Annales Geophysicae**

Atmospheres, Hydrospheres  
and Space Science

**Editor-in-Chief:**

S.W.H. Cowley

**Editorial Executive:**

S. Perret



An international, multi- and inter-disciplinary scientific journal covering the fields:

- Physics and dynamics of the oceans and seas
- Air-sea and air-land-vegetation interactions
- Modelling and remote sensing of oceans, atmospheres and climate
- Physics, dynamics and chemistry of the lower, middle and upper atmosphere of the Earth
- Physics of the ionosphere and magnetosphere of the Earth
- Interplanetary and heliospheric physics
- Physics and dynamics of the solar atmosphere
- Space plasma physics and active experiments in space.

**Subscription information  
for 1998:**

Volume 16, 12 issues

DM 1798,-

ISSN 0992-7689 Title No. 585

ISSN 1432-0576 electronic edition

**Please order from**

**Springer-Verlag Berlin**

**Fax: + 49 / 30 / 8 27 87- 448**

**e-mail: [subscriptions@springer.de](mailto:subscriptions@springer.de)**

**or through your bookseller**

Plus carriage charges. Price subject to change without notice.  
In EU countries the local VAT is effective. Errors and omissions excepted.



**Springer**

# Surveys in Geophysics

*An International Review Journal of Geophysics  
and Planetary Sciences*

*published under the auspices of The European Geophysical Society*

## Associate Editors:

W.I. Axford  
A.L. Berger  
H. Burkhardt  
G. Vachaud

## Editorial Board:

C.E. Barton, P. Bauer, V. Cermak, M.L. Chanin, M. Coradini, K.M. Creer, A. Ebel,  
J. Gallart, J.A. Johnson, J. Jouzel, P. Kabat, M. Leppäranta, G. Marklund, I. Marson,  
P.L. Read, M. Rycroft, F.D. Stacey, E. Thrane, John T. Weaver

*Surveys in Geophysics* publishes papers on the study of the physical processes occurring within the Earth, on its surface and in the space surrounding it, including its interaction with other bodies in the solar system. The papers appearing in the journal present a concise, well constructed review of recent advances in areas of topical interest, written for the broad geophysical community, i.e. all earth scientists having some background in physics, whether they are working in academia or are engaged in other professional activities. The nature of the review articles which appear as soon as is practicable after the pioneering work which they describe, is such that they can also be used by graduate students in their coursework as an alternative to textbooks.

The subjects dealt with in *Surveys in Geophysics* comprise all areas covered by EGS, IUGG and AGU: the solid Earth, its oceans and atmosphere, solar-terrestrial phenomena, planets and space physics, hydrology, atmospheric physics, meteorology, the magnetosphere and ionosphere; the geophysics of the Moon and the terrestrial-type planets; and the physics of exploration for natural resources, including new developments in the methods and techniques of applied geophysics. Readers of *Surveys in Geophysics* thus have available mature, thoughtful reviews of recent developments in their own field, and they may be confident of keeping abreast in areas peripheral to their own. Its unparalleled access and breadth of coverage make *Surveys in Geophysics* one of the leading specialist publications on the Earth sciences.

## Recently Published Review Articles:

- P.Yiou, E. Baert and M.F. Loutre / Spectral Analysis of Climate Data
- Hans Volland / Atmosphere and Earth's Rotation
- Rita Schulz / Dust and Gas in D/Shoemaker-Levy 9
- J.C.I. Dooge / Search for Simplicity in Hydrology
- G.K. Korotaev / Radiating Vortices in Geophysical Fluid Dynamics
- G.J. Borradaile / Deformation and Paleomagnetism

## Subscription Information:

ISSN 0169-3298

1998, Volume 19 (6 issues)

Subscription Rate: NLG 830.00/USD 426.00, including postage and handling.

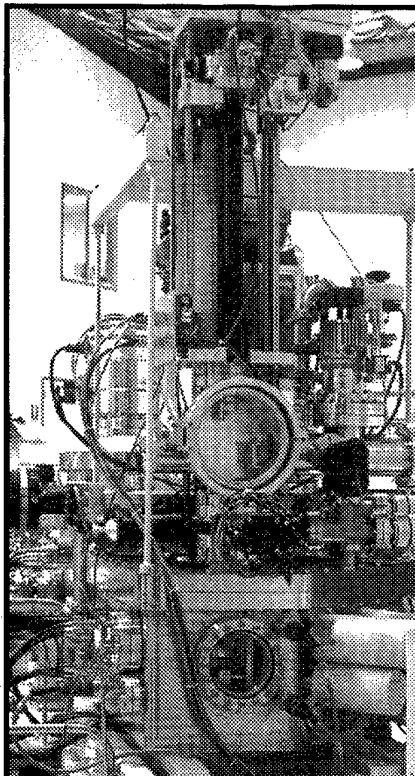
**Special Price for EGS Members: DM 165.00 (1998)**

P.O. Box 322, 3300 AH Dordrecht, The Netherlands  
P.O. Box 358, Accord Station, Hingham, MA 02018-0358, U.S.A.

<http://www.wkap.nl>

Kluwer  
academic  
publishers





# SHRIMP

**Sensitive High Resolution Ion Micro Probe** - or SHRIMP - is a large, double focusing secondary ion mass spectrometer created for geochronological and geo- and cosmo- chemical investigations. SHRIMP is unsurpassed whenever the requirements for high spatial and mass resolution are coupled with the need for maximum sensitivity.

There are now two SHRIMPs:

## **SHRIMP II**

1.2% Useful Yield  
 $M/\Delta M > 5000$  (1% definition)  
 5 - 30  $\mu\text{m}$  sharply defined, flat-bottomed craters  
 Simultaneous viewing of sample during analysis

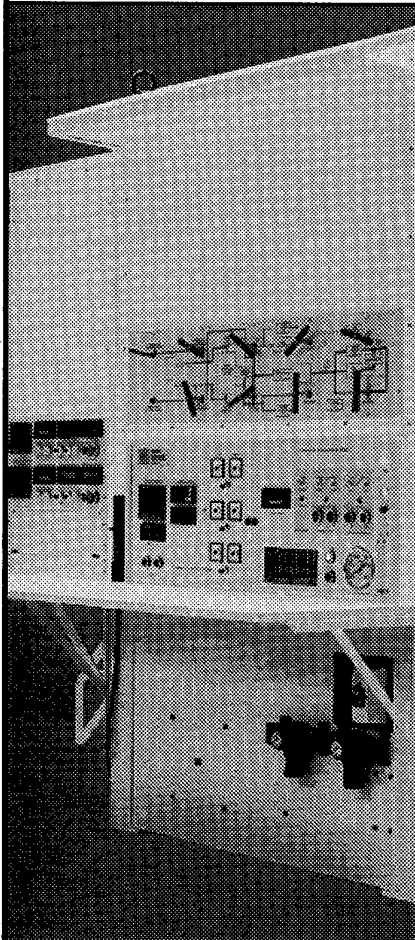
## **SHRIMP RG**

Reverse Geometry - mass analysis precedes energy analysis  
 A factor of four increase in mass resolution for a given sensitivity

Both SHRIMPs have been designed for ease of operation, low maintenance, minimum downtime and high throughput.



## PARTNERS IN RESEARCH



# HPT

**The HPT Testing Machine** provides a comprehensive facility for mechanical testing of materials at confining pressures to 500 MPa (70,000psi) and temperatures to 1600K (1300°C). It can also provide the basic high-pressure high-temperature environment for other types of research, such as hot isostatic pressing (HIP), materials synthesis, and physical property measurements. Modular design allows additional features to be added as requirements arise.

## **Design Features**

Safety and convenience in use involving precautions for safe operation while at the same time minimising the hassles of high pressure work.

Three-zone internal furnace: ensures minimal heating of the pressure vessel while permitting relatively rapid heating and cooling as well as easy control of the temperature distribution.

Internal Load Cell: permits sensitive measurement of axial load and displacement in mechanical testing, without correction for piston friction being required.

Additional features: Pore-fluid and torsion systems can be added at any time.

## **Australian Scientific Instruments Pty Ltd**

111-113 Gladstone St,  
 Fyshwick ACT 2609 Australia  
 PO Box 857, Fyshwick ACT 2609  
 ACN 008 644 273

Tel: IDD (612) STD (02) 6280 7570  
 Fax: IDD (612) STD (02) 6280 4985  
 Email: askasi@asi.anutech.com.au  
 Web: <http://www.anutech.com.au/asi/>

A Subsidiary of Anutech Pty Ltd ACN 008 548 650

# Incoherent Scatter: Theory, Practice and Science

**D. Alcayde, Editor**

**EISCAT Technical Report 97/53, vi + 314 p, Nov. 1997.**

This book is intended for use by graduate students for entering the field of Incoherent Scatter Research; it is felt however (and also hoped) that the various chapters of this book can be of some interest for more senior scientists.

## Table of Contents:

*Tor Hagfors*, Plasma Fluctuations Excited by Charged Particle Motion and their Detection by Weak Scattering of Radio Waves

*Wlodek Kofman*, Plasma Instabilities and their Observations with the Incoherent Scatter Technique

*Asko Huuskonen and Markku Lehtinen*, Modulation of Radiowaves for Sounding the Ionosphere: Theory and Applications

*Kristian Schlegel*, The Use of Incoherent Scatter Data in Ionospheric and Plasma Research

*Mike Lockwood*, Solar Wind - Magnetosphere Coupling

*Yohsuke Kamide*, Aurora/Substorm Studies with Incoherent-Scatter Radars

*Arthur D. Richmond*, Ionosphere-Thermosphere Interactions at High Latitudes

*Juergen Roettger*, Radar Observations of the Middle and Lower Atmosphere

A limited number of copies is available on sale at cost by the EISCAT Scientific Association (Order Deadline 1 June 1998)

**Book Order Form to be addressed to: EISCAT Scientific Association, Box 812, S-98128 Kiruna, Sweden**

**E-mail: Anette.Snallfot@eiscathq.irf.se**

## Special Order Form

**Incoherent Scatter: Theory, Practice and Science,  
EISCAT Technical Report 97/53, 1997**

Order Deadline: 1 June 1998

Name: \_\_\_\_\_

Number of Copies: \_\_\_\_\_ x 200 SEK each

Institute: \_\_\_\_\_

Total amount to be billed: \_\_\_\_\_

Address: \_\_\_\_\_

Bill to: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

E-mail: \_\_\_\_\_

\_\_\_\_\_

## Geomagnetism and Aeronomy

**(Proceedings of the Historical Session at EGS Vienna and IAGA Uppsala, 1997)**

During the EGS Assembly in Vienna (April 1997) a history session (Solar-Terrestrial Physics during the 19/20th centuries) has been organized. In the same year the History commission of IAGA started its session "Geomagnetism and aeronomy" in Uppsala. The selected lectures of both sessions are now published in a special book. This book can be ordered for DEM 30,- or USD 20,-. Please contact: Dr. Wilfried Schröder, Geophysical Station, Hechelstr. 8, D-28777 Bremen, Germany

# Scientific Programme Overview

## I. Society Symposia (EGS)

- EGS1** **Tribute to Stephan Mueller**  
**01 Tectonics, structure and dynamics of the Alpine-Mediterranean System**  
 Convener: J. Ansorge (Zürich),  
 Co-Conveners: E. Banda (Barcelona),  
 H.-G. Kahle (Zürich)  
**02 Evolution of the African-Eurasian plate boundary**  
 Convener: J.E.T. Channell (Gainesville, FL),  
 Co-Conveners: W.R. Jacoby (Mainz),  
 S. Zerbini (Bologna)  
**03 Seismicity and seismotectonics of the Mediterranean region**  
 Convener: M. Garcia-Fernandez (Barcelona),  
 Co-Conveners: D. Mayer-Rosa (Zürich),  
 G.F. Panza (Trieste)
- EGS2** **Geophysical and geological signatures of past and present climate change**  
 Convener: I. Premoli-Silva (Milan), Co-Conveners: T.D. Herbert (Providence, RI), J. Maley (Montpellier)
- EGS3** **Modelling techniques and joint inversion in Earth sciences**  
 Convener: H.-J. Götze (Berlin), Co-Conveners: B. Meurers (Wien), T.V. Romanyuk (Moscow), S. Schmidt (Berlin), G. Strykowski (Copenhagen)
- EGS4** **Space techniques for acquisition of aeronom-ionospheric data in the lower thermosphere**  
 Convener: G. Laneve (Roma), Co-Conveners: F.A. Herrero (Greenbelt, MD)

## II. Solid Earth Geophysics (SE)

- SE1** **Open session on tectonophysics**  
 Convener: R. Sabadini (Milano)
- SE2** **Dynamics, mineral physics and tomographic imaging of the Earth's mantle**  
 Convener: J.-P. Montagner (Paris), Co-Conveners: H. Schmeling (Frankfurt/Main)
- SE3** **Seismology and physics of the Earth's core and mantle**  
 Convener: R. Kind (Potsdam), Co-Conveners: A.W.B. Jacob (Dublin), M. Weber (Göttingen)
- SE4** **Hot spots and plumes in the mantle**  
 CANCELLED, papers included in SE14
- SE5** **Geodynamics of the lithosphere: images and models of active tectonics**  
 Convener: K.P. Furlong (University Park, PA), Co-Conveners: M.J.R. Wortel (Utrecht)
- SE6** **Post-glacial rebound and its influence on sea level, crustal deformation and gravity: new observations, modelling results and initiatives**  
 Convener: J.X. Mitrovica (Toronto), Co-Conveners: L.L.A. Vermeersen (Stuttgart)

- SE7** **Variations in the Earth's rotation: implications for the dynamics and structure of the mantle and for global change processes**  
 Convener: R. Sabadini (Milano), Co-Conveners: R.J. O'Connell (Cambridge, MA)
- SE8** **Sedimentary basin modelling and integration of geophysical and sedimentary geology data**  
 Convener: S. Cloetingh (Amsterdam), Co-Conveners: F. Horvath (Budapest), W. Sassi (Rueil Malmaison)
- SE9** **Combined geophysical and geochemical approaches to study mid-ocean ridges**  
 CANCELLED, papers included in SE47.3
- SE10** **Fault interaction and earthquake mechanics**  
 Convener: S. Das (Oxford), Co-Conveners: M. Cocco (Rome)
- SE11** **Lithospheric dynamic processes as seen from geomorphology**  
 Convener: J.-P. Brun (Rennes), Co-Conveners: M. Kirby (Leeds)
- SE12** **From the Arctic to the Mediterranean: salt, shale and igneous diapirs in and around Europe**  
 Convener: Y. Mart (Haifa), Co-Conveners: B.C. Vendeville (Austin, TX)
- SE13** **Intraplate earthquakes, stresses and large scale tectonic structure**  
 Convener: S. Gregersen (Copenhagen), Co-Conveners: G.F. Panza (Trieste)
- SE14** **Modern rifts: plumes, kinematic conditions and lithospheric inhomogeneities**  
 Convener: J. Deverchere (Villefranche-sur-Mer), Co-Conveners: U. Achauer (Strasbourg), U. Hansen (Münster)
- SE15** **Crustal structure revealed by scientific drilling**  
 Convener: J. Lauterjung (Potsdam)
- SE16** **3-D crustal imaging of France**  
 Convener: P. Ledru (Orleans), Co-Conveners: K. Fuchs (Karlsruhe), A. Galdeano (Paris)
- SE17** **Dynamics of plate boundaries**  
**01 Geodynamics of collision belts: stacking and exhumation processes**  
 Convener: A. Kiliass (Thessaloniki), Co-Conveners: U. Ring (Mainz)  
**02 Active deformation along plate boundaries: measurements and models**  
 Convener: E. Calais (Valbonne), Co-Conveners: S. Wdowinski (Ramat Aviv)  
**03 Seismological studies in convergent plate margins**  
 Convener: E. Kissling (Zürich), Co-Conveners: A. Polonia (Bologna)
- SE18** **From EGT to EUROPROBE: joint European geoscientific initiatives**  
 CANCELLED, papers included in SE19
- SE19** **The Trans European Suture Zone (TESZ)**  
 Convener: H. Thybo (Copenhagen), Co-Conveners: D.J. Blundell (Egham), D.G. Gee (Uppsala), A. Guterch (Warsaw), T.C. Pharaoh (Nottingham)



- SE20 Aspects of the Carpathian-East Alpine-Pannonian geodynamics: the PANCARDI approach**  
Convener: C. Tomek (Salzburg), Co-Convener: F. Neubauer (Salzburg)
- SE21 Open session on seismology**  
Convener: W. Rabbel (Kiel)
- SE22 Images of the continental lithosphere by active seismic methods**  
Convener: W. Rabbel (Kiel), Co-Conveners: J. Gallart Muset (Barcelona), H. Thybo (Copenhagen)
- NH3 Earthquake risk mitigation (joint with SE)**  
**01 Models and methods in seismic hazard assessment**  
Convener: T.M. Tsapanos (Thessaloniki), Co-Convener: C.V. Christova (Sofia)  
**02 Seismic hazard evaluation in high seismicity areas by observing precursory phenomena**  
Convener: M.E. Contadakis (Thessaloniki), Co-Convener: J. Zschau (Potsdam)  
**03 Macroseisms: present state of intensity-assessment procedures and future perspectives**  
Convener: A. Tertulliani (Rome), Co-Convener: I. Cecic (Ljubljana)  
**04 Active fault and earthquake risk mitigation**  
Convener: A.A. Barka (Paris), Co-Convener: I.S. Stewart (Isleworth)  
**05 Landslide hazards in seismically active regions**  
Convener: J. Wasowski (Bari), Co-Convener: V. Del Gaudio (Bari)  
**06 Efficiency of building codes in the mitigation of the vulnerability**  
Convener: V. Petrini (Milano), Co-Convener: L.G. Pujades Benet (Barcelona)  
**07 Seismic microzonation in urban areas**  
Convener: A. Roca (Barcelona), Co-Convener: C.S. Oliveira (Lisboa)
- SE23 Seismic anisotropy, scattering and attenuation**  
Convener: J. Plomerova (Praha), Co-Convener: C.J. Bean (Dublin)
- SE24 Seismic rupture processes: confrontation of observations and theory**  
Convener: P.F. Ihmlé (Zürich), Co-Convener: A. Deschamps (Valbonne)
- SE24.1 The Umbria-Marche earthquake sequence of 1997: first results**  
Convener: P.F. Ihmlé (Zürich), Co-Convener: A. Amato (Rome)
- SE25 High-resolution seismics: theory, methods and applications**  
Convener: H. Lykke-Andersen (Aarhus), Co-Convener: G. Brancolini (Trieste)
- SE26 3-D seismic modelling and high performance computing**  
Convener: F.J. Seron (Zaragoza), Co-Conveners: F. Maggio (Cagliari), F.J. Sabadell (Zaragoza)
- SE27 Mechanics of tectonic and volcanic earthquakes (co-sponsored by NP)**  
Convener: J. Silený (Praha), Co-Convener: G.F. Panza (Trieste)
- SE28 Open session on volcanology, geochemistry and petrology**  
Convener: P. Jakes (Praha)
- SE29 Continental roots: their petrology, geochemistry and geophysical features**  
Convener: P. Jakes (Praha), Co-Convener: M. Dragoni (Bari)
- SE30 Degassing of high-level magma chambers and the evolution of magmatic-hydrothermal systems**  
CANCELLED, papers included in SE33
- SE31 Mechanics and thermalfluid-dynamics of volcanic processes: modelling, observations and laboratory experiments (co-sponsored by NP)**  
Convener: G. de Natale (Napoli), Co-Conveners: P. Allard (Gif-sur-Yvette), M. Bonafede (Bologna)
- SE32 Crustal melting in nature and experiment**  
Convener: J. Kotkova (Praha), Co-Convener: A. Patino-Douce (Athens, GA)
- SE33 Pre-eruptive processes**  
Convener: J. Marti (Barcelona), Co-Conveners: M.R. Carroll (Bristol), P. Fulignati (Pisa), A. Gudmundsson (Bergen)
- NH4 Volcanic hazards: field studies, instrumentation and observation networks (joint with SE)**  
Convener: C. Kilburn (London), Co-Convener: G. Vougioukalakis (Athens)
- SE34 Rockmagnetism, palaeomagnetism and environmental magnetism**  
Convener: V. Hoffmann (Tübingen/Mississauga)  
**01 New challenges in rockmagnetism, palaeomagnetism and environmental magnetism**  
Convener: V. Hoffmann (Tübingen/Mississauga), Co-Convener: E. Petrovsky (Praha)  
**02 Past and present geomagnetic field**  
Convener: M. Prevot (Montpellier), Co-Conveners: J.J. Love (Leeds), E. Schnepp (Einbeck)  
**03 Effect of chemical alteration on magnetization**  
Convener: Ö. Özdemir (Mississauga), Co-Convener: A.P. Roberts (Southampton)  
**04 Sediment magnetic records of climatic cycles and events**  
Convener: D. Williamson (Minneapolis, MN), Co-Convener: C.E. Geiss (Minneapolis, MN)  
**05 New challenges in environmental research: magneto-monitoring of anthropic influence to ecosystems**  
Convener: R. Scholger (Frohnleiten), Co-Convener: P. Rochette (Aix-en-Provence)  
**06 Palaeomagnetism and tectonic evolution of the Mediterranean area**  
Convener: J.M. Pares (Ann Arbor, MI), Co-Convener: J. Dinarès-Turell (Utrecht)
- SE35 Archaeology and archaeomagnetism**  
Convener: J. Fassbinder (München), Co-Convener: V. Hoffmann (Tübingen/Mississauga)  
**01 Archaeological prospection**  
Convener: A. Schmidt (Bradford), Co-Convener: J. Fassbinder (München)

- 02 Archaeomagnetism and secular variations**  
Convener: M. Kovacheva (Sofia),  
Co-Convener: A. Chauvin (Rennes)
- SE36 Potential fields in geodesy, geophysics and geology (co-sponsored by G)**  
Convener: W.R. Jacoby (Mainz), Co-Conveners: C. Braitenberg (Trieste), E.W. Grafarend (Stuttgart)
- SE37 Regional magnetic surveys: data, models and charts**  
Convener: A. Best (Niemegek), Co-Convener: M. Chiappini (Rome)
- SE38 Long term global geophysical data products from remote sensing**  
Convener: O. Arino (Frascati), Co-Convener: Y.H. Kerr (Toulouse)
- SE39 Physical properties of geomaterials**  
**01 Open session on physical properties of geomaterials**  
Convener: J.L. Urai (Aachen), Co-Convener: E. Huenges (Potsdam)  
**02 Imaging, analysing and modelling pore structure in geomaterials**  
Convener: C. David (Strasbourg),  
Co-Conveners: D.L. Olgaard (Houston, TX), A. Rodriguez Rey (Oviedo)  
**03 The effect of rock micro-structure and fluids on rock physical properties**  
Convener: P.W.J. Glover (Aberdeen),  
Co-Conveners: E. Huenges (Potsdam), I. Main (Edinburgh), J. Safanda (Praha)  
**04 Pore pressure as a geomechanical and geophysical parameter**  
Convener: H.-J. Kumpel (Bonn),  
Co-Convener: J.-R. Grasso (Grenoble)  
**05 Physical properties of partially molten rocks**  
Convener: L.N. Dell'Angelo (Houston, TX),  
Co-Convener: C. Rosenberg (Giessen)  
**06 Physical properties of mudrocks**  
Convener: S.T. Horseman (Nottingham),  
Co-Convener: J.L. Urai (Aachen)
- SE40 Petrophysical control of anthropogenic and natural Earth's processes**  
CANCELLED, papers included in SE39.3
- SE41 Electro-magnetic and electro-kinetic properties of rocks: integration of laboratory, borehole and field measurements**  
Convener: P.W.J. Glover (Aberdeen),  
Co-Conveners: A. Revil (Aix-en-Provence), J.B. Stoll (Göttingen)
- SE42 Physical properties of fault zones**  
Convener: E.J.M. Willemse (Rijswijk),  
Co-Convener: D.J. Sanderson (Southampton)
- SE43 Advances in the physical interpretation of electromagnetic soundings**  
Convener: G. Marquis (Strasbourg),  
Co-Convener: F. Perrier (Bruyeres le Chatel)
- SE44 Can electromagnetic images constrain geophysical interpretation of tectonically active environments?**  
Convener: F. Simpson (Göttingen), Co-Conveners: A. Manzella (Pisa), P. Ritter (Potsdam), P.-A. Schnegg (Neuchatel), N. Smiljanic (Grocka)
- SE45 Observations of the electromagnetic field of the Earth in the Alpine-Mediterranean region**  
CANCELLED, papers included in SE44
- SE46 Open session on marine geophysics**  
Convener: J. Danobeitia (Barcelona)
- SE47 Structure and composition of oceanic lithosphere**  
Convener: J. Danobeitia (Barcelona)  
**01 Rifted margins**  
Convener: T.J. Reston (Aberdeen),  
Co-Convener: J.-C. Sibuet (Plouzane)  
**02 Lithospheric structure in a hotspot frame**  
CANCELLED, papers included in SE47.3  
**03 Processes of crustal accretion at mid-oceanic-ridges**  
Convener: J. Escartin (Edinburgh), Co-Conveners: E. Bonatti (Bologna), J.P. Canales (Woods Hole, MA), J.R. Cochran (Palisades, NY), R. Hekinian (Plouzane)  
**04 Collisional and transform plate boundaries and subduction zones**  
Convener: T.J. Henstock (Houston, TX),  
Co-Convener: C.R. Ranero (Kiel)
- SE48 Gas hydrates in nature: results from geophysical and geochemical studies**  
Convener: I.A. Pecher (Woods Hole, MA),  
Co-Convener: N. Kukowski (Kiel)
- SE49 Marine magnetics 35 years after Vine-Matthews-Morley discovery (in memory of D. Matthews)**  
Convener: J. Dymant (Plouzane), Co-Convener: U. Körner (Montpellier)
- SE50 Recent marine geological and geophysical investigation in the Mediterranean and Black Sea**  
Convener: M. Ergün (Izmir), Co-Conveners: M.K. Ivanov (Moscow), J.M. Woodside (Amsterdam)
- SE51 Structures and processes in sedimentary fans**  
Convener: G. Uenzelmann-Neben (Bremerhaven),  
Co-Convener: L. Droz (Brest)
- SE52 Spontaneous globally synchronized variations of physical parameters (co-sponsored by G)**  
Convener: I.I. Rokityansky (Kiev),  
Co-Conveners: C. Denis (Liège), P. Varga (Sopron)
- G7 Joint EGS/AGU Symposium on geodetic observation and geophysical interpretation of mass movements in the Earth system (joint with SE)**  
Convener: J.O. Dickey (Pasadena, CA),  
Co-Convener: C. Reigber (Potsdam)  
**01 Solid Earth and core**  
Convener: B. Richter (Frankfurt/Main)  
**02 Ocean and hydrosphere**  
Convener: B.F. Chao (Greenbelt, MD)

- 03 Cryosphere**  
Convener: R. Dietrich (Dresden)
- 04 Atmosphere**  
Convener: A. Geiger (Zürich)
- 05 Interactions between the components of the Earth system**  
Convener: S. Zerbini (Bologna)
- G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (joint with SE)**  
Convener: H. Schuh (München), Co-Conveners: D.A. Salstein (Cambridge, MA)
- 01 Effects of the atmosphere**  
Convener: P. Gegout (Pasadena, CA)
- 02 Effects of the ocean**  
Convener: J. Sündermann (Hamburg)
- 03 Effects of the core**  
Convener: V.M.A. Dehant (Brussels)
- 04 Models, measurements and analysis of the Earth rotation**  
Convener: H. Schuh (München)
- OA17 Climate variability: models and observations (joint with SE)**  
Convener: G.J. Komen (De Bilt)
- 01 West African monsoon studies**  
Convener: C.D. Thorncroft (Reading)
- 02 Natural climate variability on the basis of past observations**  
Convener: J.-C. Duplessy (Gif-sur-Yvette)
- 03 Climate variability: time scale interactions**  
Convener: J.M. Slingo (Reading)
- 04 Clouds in the climate system: observations and modelling**  
Convener: M. Desbois (Palaiseau)
- 05 Prediction and detection of anthropogenic climate change**  
Convener: T.C. Johns (Bracknell)
- NP1.01 Scaling, multifractals and nonlinearity in Solid Earth (joint with SE)**  
Convener: J. Schmittbuhl (Paris), Co-Conveners: P. Bak (Upton, NY), D.L. Turcotte (Ithaca, NY)
- NP3.06 Mixing in the interior of the Earth (recycling of subducted slabs) (joint with SE)**  
Convener: Y. Ricard (Lyon)
- III. Geodesy (G)**
- G1 Environmental effects on gravity and inter-comparisons with other techniques**  
Convener: R.G. Hipkin (Edinburgh), Co-Conveners: T.M. van Dam (Boulder, CO)
- G2 Recent crustal movements of coastal regions: new geodetic, geologic and geophysical results**  
Convener: P.A. Pirazzoli (Meudon), Co-Conveners: L. Bastos (Vila Nova de Gaia)
- G3 Geophysical applications of radar interferometry**  
Convener: D. Massonnet (Toulouse), Co-Conveners: K. Feigl (Toulouse)
- G4 Precise satellite orbits for geophysical applications**  
Convener: M. Rothacher (Bern), Co-Conveners: R.J. Eanes (Austin, TX)
- G5 Ocean modelling from altimetry and remote sensing (co-sponsored by OA)**  
Convener: P. Knudsen (Copenhagen), Co-Conveners: P.Y. Le Traon (Ramonville Saint-Agne)
- G6 High resolution monitoring of land and ice surface with altimetry and SAR interferometry**  
Convener: R. Klees (Delft), Co-Conveners: F. Remy (Toulouse)
- G7 Joint EGS/AGU Symposium on geodetic observation and geophysical interpretation of mass movements in the Earth system (co-sponsored by SE)**  
Convener: J.O. Dickey (Pasadena, CA), Co-Conveners: C. Reigber (Potsdam)
- 01 Solid Earth and core**  
Convener: B. Richter (Frankfurt/Main)
- 02 Ocean and hydrosphere**  
Convener: B.F. Chao (Greenbelt, MD)
- 03 Cryosphere**  
Convener: R. Dietrich (Dresden)
- 04 Atmosphere**  
Convener: A. Geiger (Zürich)
- 05 Interactions between the components of the Earth system**  
Convener: S. Zerbini (Bologna)
- G8 Integrated studies of sea-level fluctuations and crustal movements in the Mediterranean and adjacent regions**  
Convener: A. Cazenave (Toulouse), Co-Conveners: H.-P. Plag (Honefoss)
- G9 Atmospheric sounding with GPS**  
Convener: G. Blewitt (Newcastle-upon-Tyne), Co-Conveners: A. Niell (Westford, MA)
- G10 Satellite and airborne gravimetric and altimetric techniques**  
Convener: R. Forsberg (Copenhagen), Co-Conveners: R. Haagmans (Delft)
- G11 Recent advances in precise geoid determination methodology**  
Convener: I.N. Tziavos (Thessaloniki), Co-Conveners: M. Vermeer (Masala)
- G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
Convener: H. Schuh (München), Co-Conveners: D.A. Salstein (Cambridge, MA)
- 01 Effects of the atmosphere**  
Convener: P. Gegout (Pasadena, CA)
- 02 Effects of the ocean**  
Convener: J. Sündermann (Hamburg)
- 03 Effects of the core**  
Convener: V.M.A. Dehant (Brussels)
- 04 Models, measurements and analysis of the Earth rotation**  
Convener: H. Schuh (München)
- G13 Techniques for Earth observation**  
CANCELLED, papers included in G15
- G14 Contribution of permanent geodetic network to Earth Science in Europe**  
Convener: E. Calais (Valbonne), Co-Conveners: B.A.C. Ambrosius (Delft)

- G15 Instrumental challenges in geodesy**  
Convener: P. Tomasi (Bologna), Co-Conveners: G. Bianco (Matera), J.J. Degnan (Greenbelt, MD), C.R. Wilson (Washington, DC)
- G16 Geodetic and geodynamic achievements of the CEI (Central European Initiative)**  
Convener: J. Sledzinski (Warsaw), Co-Conveners: J. Kostecky (Prague)
- SE36 Potential fields in geodesy, geophysics and geology (joint with G)**  
Convener: W.R. Jacoby (Mainz), Co-Conveners: C. Braitenberg (Trieste), E.W. Grafarend (Stuttgart)
- SE52 Spontaneous globally synchronized variations of physical parameters (joint with G)**  
Convener: I.I. Rokityansky (Kiev), Co-Conveners: C. Denis (Liège), P. Varga (Sopron)
- IV. Hydrological Sciences (HS)**
- HSA1 Hydrology and the Earth's crust**
- 01 Characterization and modelling of the 2-D and 3-D structure of porous and fractured formations**  
Convener: P. Huggenberger (Basel), Co-Conveners: R. Mackay (Birmingham)
- 02 Identification of model parameters in groundwater hydrology**  
Convener: M. Giudici (Milano), Co-Conveners: G. de Marsily (Paris)
- 03 Reactive mass transport: experimental studies of chemical, colloidal and biological processes**  
Convener: P. Gouze (Montpellier), Co-Conveners: G. Schäfer (Strasbourg)
- 04 Coastal aquifer dynamics and groundwater recharge**  
Convener: L. Candela (Barcelona), Co-Conveners: R. Munoz-Carpena (Tenerife)
- HSA2 Hydrology and landforms and fluvial systems**
- 01 Measurement of bedload and suspended sediment in turbulent flow**  
Convener: J.B. Laronne (Beer-Sheva), Co-Conveners: P. Ergenzinger (Berlin)
- 02 Morphological processes at the hillslope and river scale**  
Convener: G. Roth (Genova), Co-Conveners: V. Copertino (Potenza)
- 03 Sediment and contaminant transfers at the land/ocean interface**  
Convener: G. Leeks (Wallingford), Co-Conveners: A. Monaco (Perpignan)
- HSA3 Open session on hydrology and climate**  
Convener: J.P. O'Kane (Cork), Co-Conveners: O. Bonacci (Split), A. Pulido-Bosch (Granada)
- HSA4 Open session on hydrology and weather**  
Convener: P. Burlando (Zürich)
- NH2 Meteorological and hydrological hazards (joint with HS)**
- 01 Uncertainty assessment in meteo-hydrologic warning**  
Convener: E. Todini (Bologna), Co-Conveners: F. Castelli (Perugia)
- 02 Prediction of hazardous events of meteorological origin**  
Convener: S. Tibaldi (Bologna), Co-Conveners: S. Alonso (Palma de Mallorca)
- 03 Flood hazards and flood risk: regional analysis of extremes (co-sponsored by OA)**  
Convener: P. Bois (St. Martin d'Heres), Co-Conveners: V. Oancea (Bucharest)
- 04 Modelling and flood mapping in rural and urban areas**  
Convener: G. Oberlin (Lyon), Co-Conveners: G. Roth (Genova)
- 05 Shallow landslides and rainfall triggering**  
Convener: M. Sorriso-Valvo (Roges di Rende), Co-Conveners: P. Versace (Montalto Uffugo Scalo)
- HSA5 Open session on hydrology and surface hydrological processes**  
Convener: G. Kiely (Cork), Co-Conveners: H. Bormann (Bonn)
- HSA6 Hydrology and soil processes**
- 01 Recent advances in tracers in vadose zone hydrology**  
Convener: S.W. Tyler (Grenoble), Co-Conveners: W.M. Edmunds (Wallingford), M. Flury (Pullman, WA), B.R. Scanlon (Austin, TX)
- 02 Scale problems of soil hydrological measuring techniques**  
Convener: B. Huwe (Bayreuth), Co-Conveners: S. Scherrer (Zürich)
- HSA7 Open session on hydrology and living communities**  
Convener: J.P. O'Kane (Cork)
- HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**
- 01 Natural attenuation and intrinsic bioremediation: field studies**  
Convener: P. Grathwohl (Tübingen), Co-Conveners: K.-U. Totsche (Bayreuth)
- 02 New developments in in-situ treatment of subsurface contaminations**  
Convener: H.H.M. Rijnaarts (Apeldoorn), Co-Conveners: T.N.P. Bosma (Apeldoorn)
- 03 Redox processes in aquifers**  
Convener: P. Behra (Strasbourg), Co-Conveners: M. Isenbeck-Schröter (Heidelberg)
- HSA9 Hydrology and applied mathematics**
- 01 Process representation in hydrological models - can it be achieved?**  
Convener: F. Gallart (Barcelona), Co-Conveners: S.M. White (Durham)
- NP1.02 Scaling, multifractals and nonlinearity in hydrology (joint with HS)**  
Convener: C. Onof (London), Co-Conveners: J. Olsson (Fukuoka), D. Veneziano (Cambridge, MA)
- HSB1 Water resources research**
- 01 Water resources of international river basins**  
Convener: H.H.G. Savenije (Delft), Co-Conveners: P. van der Zaag (Delft)

- 02 Influence of environmental and anthropogenic change on flood processes (*co-sponsored by NH*)**  
Convener: G. Blöschl (Wien), Co-Convener: P. Burlando (Zürich)
- 03 Remote sensing and GIS in hydrology**  
Convener: F. Baret (Avignon), Co-Conveners: T. Estrela (Madrid), A. Stips (Ispra)
- 04 Influence of landuse and moisture feedback on continental rainfall**  
Convener: H.H.G. Savenije (Delft), Co-Conveners: A. Bronstert (Potsdam), U. Ulbrich (Köln)
- HSB2 Water resources engineering and management**
- 01 Water scarcity**  
Convener: H.H.G. Savenije (Delft), Co-Convener: M. Bruen (Dublin)
- 02 Sustainable development of watersheds and river processes**  
Convener: H.M. Habersack (Wien), Co-Convener: M. de Groen (Delft)
- 03 Groundwater systems and management**  
Convener: M.Kh. Kholghi (Karaj), Co-Convener: L. Candela (Barcelona)
- 04 Resource development and management in karst aquifer systems**  
CANCELLED, papers included in HSA3
- HSC1 Special hydrological symposia**
- 01 The French National Programme in Hydrology**  
Convener: M. Vauclin (Grenoble)
- 02 Dryland degradation in the Mediterranean: threat, processes and mitigation**  
Convener: J.C. Bathurst (Newcastle-upon-Tyne), Co-Convener: G. Quaranta (Potenza)
- 03 Fire: impact on hydrology, sediment yield and ecosystems of Mediterranean lands**  
Convener: J.M. Moreno (Toledo), Co-Convener: S. Rambal (Montpellier)
- 04 Sources and transfer of water and sediment in Mediterranean river basins**  
Convener: M. Sala (Barcelona), Co-Convener: M. Inbar (Haifa)
- 05 Catchment management in the Mediterranean for efficient water use**  
Convener: T. Estrela (Madrid), Co-Convener: D. Jamieson (Newcastle upon Tyne)
- V. Oceans and Atmosphere (OA)**
- OA1 The thermohaline circulation**  
Convener: A. Colin de Verdiere (Brest), Co-Convener: F. Schott (Kiel)
- OA2 Processes in regions of oceanic time series stations**  
Convener: T.J. Müller (Kiel), Co-Convener: R. Lukas (Honolulu, HI)
- OA3 The North Atlantic Oscillation: decadal variability in ocean and atmosphere**  
Convener: A. Hense (Bonn), Co-Conveners: S. Rahmstorf (Potsdam), G. Reverdin (Toulouse)
- OA4 Circulation variability at mesoscale**  
Convener: C. Millot (La Seyne), Co-Convener: A.M. Treguier (Plouzane)
- OA5 Open session on coastal/shelf-sea dynamics**  
Convener: A. Lehmann (Kiel), Co-Convener: G.I. Shapiro (Moscow)
- OA6 Dynamics of the polar ocean and its coupling to sea ice**  
Convener: A.J. Willmott (Staffordshire), Co-Convener: P. Lemke (Kiel)
- OA7 Antarctic ocean circulation: observations and models**  
Convener: A. Beckmann (Bremerhaven), Co-Convener: M.A. Garcia (Barcelona)
- OA8 The Mediterranean Sea: general circulation variability and related processes**  
Convener: N. Pinardi (Bologna), Co-Convener: U. Send (Kiel)
- G5 Ocean modelling from altimetry and remote sensing (*joint with OA*)**  
Convener: P. Knudsen (Copenhagen), Co-Convener: P.Y. Le Traon (Ramonville Saint-Agne)
- OA9 Basic turbulence studies**  
Convener: A. Petrosyan (Moscow), Co-Convener: T. Gerz (Wessling)
- OA10 Fluxes over terrestrial surfaces**  
Convener: N.O. Jensen (Roskilde)
- 01 Surface fluxes in non-homogeneous terrain**  
Convener: Th. Foken (Bayreuth)
- 02 Long term measurements of surface fluxes**  
Convener: R. Valentini (Viterbo)
- OA11 Mesoscale transport of air pollution, including land/sea areas**  
Convener: T. Mikkelsen (Roskilde), Co-Convener: B. Artinano (Madrid)
- OA12 Extreme weather events in the Mediterranean**  
Convener: F. Prodi (Bologna), Co-Convener: A.E. Eidelman (Beer-Sheva)
- OA13 Cyclogenesis and fronts: FASTEX**  
Convener: J.-P. Chalon (Toulouse), Co-Convener: A.J. Thorpe (Reading)
- OA14 Parametrizations in large scale atmospheric models**  
Convener: P. Viterbo (Reading)
- 01 Intercomparison and validation of the ocean-atmosphere flux fields**  
Convener: S. Gulev (Moscow), Co-Convener: P.K. Taylor (Southampton)
- 02 Major systematic errors in global coupled models**  
Convener: D.B. Stephenson (Toulouse), Co-Convener: M.A. Balmaseda (Reading)
- 03 Sensitivity of radiative perturbations in global coupled models**  
Convener: O. Boucher (Villeneuve d'Ascq)
- ST2 Open session on the middle atmosphere (*joint with OA*)**  
Convener: M. Dameris (Wessling), Co-Convener: B.C. Krüger (Lausanne)
- ST16 Stratosphere-troposphere-exchange (*joint with OA*)**  
Convener: V. Wirth (München), Co-Convener: P.H. Haynes (Cambridge)

- OA15 Clouds and their impact on radiation and photo-chemical processes**  
Convener: E. Raschke (Geesthacht)  
**01 Remote sensing of clouds and aerosols**  
Convener: E. Raschke (Geesthacht)  
**02 Modelling of cloud systems**  
Convener: N. Mölders (Leipzig)  
**03 Radiative transfer and budget**  
Convener: A. Ohmura (Zürich)  
**04 Photo-chemical processes in clouds**  
Convener: A.I. Flossmann (Aubiere)
- OA16 Interaction of biogenic and anthropogenic compounds in the Mediterranean and its influence on atmospheric chemistry**  
Convener: G. Seufert (Ispra), Co-Convener: N. Hewitt (Lancaster)
- OA17 Climate variability: models and observations (co-sponsored by SE)**  
Convener: G.J. Komen (De Bilt)  
**01 West African monsoon studies**  
Convener: C.D. Thorncroft (Reading)  
**02 Natural climate variability on the basis of past observations**  
Convener: J.-C. Duplessy (Gif-sur-Yvette)  
**03 Climate variability: time scale interactions**  
Convener: J.M. Slingo (Reading)  
**04 Clouds in the climate system: observations and modelling**  
Convener: M. Desbois (Palaiseau)  
**05 Prediction and detection of anthropogenic climate change**  
Convener: T.C. Johns (Bracknell)
- ST14 Solar imprints in terrestrial archives (joint with OA)**  
Convener: G. Cini-Castagnoli (Torino)
- OA18 Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere (co-sponsored by ST)**  
Convener: U. Platt (Heidelberg), Co-Convener: G.K. Moortgat (Mainz)
- OA19 Free-radicals in the troposphere (co-sponsored by ST)**  
Convener: H.-P. Dorn (Jülich), Co-Convener: A. Volz-Thomas (Jülich)
- OA20 Radiogenic isotopes as tracers of source-areas for aerosols, suspended matter and sediments (co-sponsored by ST)**  
Convener: F.E. Grousset (Talence), Co-Convener: F. Sirocko (Potsdam)
- OA21 Biogeochemical interactions in the coastal marine environment**  
Convener: A. Monaco (Perpignan), Co-Convener: N.B. Price (Edinburgh)
- NP3.04 Biological processes and mixing in the ocean (joint with OA)**  
Convener: K.J. Richards (Southampton)
- NP3.05 Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere (joint with OA & ST)**  
Convener: P.H. Haynes (Cambridge)
- OA22 Biogeochemical processes in submarine hydro-thermal systems along the Hellenic Volcanic Island Arc**  
Convener: S. Varnavas (Patras), Co-Convener: P.R. Dando (Gwynedd)
- ST15 Atmospheric ozone (joint with OA)**  
Convener: M.-M. Hirschberg (Freising/Weihenstephan)  
**01 Modelling and validation with satellite data**  
Convener: I.M. Vardavas (Crete), Co-Convener: F.W. Taylor (Oxford)  
**02 Polar ozone**  
Convener: A.A. Krivolutsky (Dolgoprudny)  
**03 Changes in UV-B radiation**  
Convener: B.C. Krüger (Lausanne)  
**04 Tropospheric ozone with emphasis on the Mediterranean region**  
Convener: C. Varotsos (Athens)  
**05 Ozone as a climate gas**  
Convener: K.P. Shine (Reading), Co-Convener: D.A. Hauglustaine (Boulder, CO)
- ST17 Aviation and space flight (joint with OA)**  
**01 Aviation impact on the atmosphere**  
Convener: H. Kelder (De Bilt), Co-Convener: R. Sausen (Wessling)  
**02 Air traffic meteorology and weather impact on aviation**  
Convener: T. Hauf (Wessling), Co-Convener: J.-C. André (Toulouse), J.-M. Carrière (Toulouse), A. Corjon (Toulouse)  
**03 Air traffic meteorology**  
CANCELLED, papers included in ST17.2
- OA23 Operational oceanography: existing systems, developments and future potential**  
Convener: R.A. Flather (Merseyside), Co-Convener: M. Bohle-Carbonell (Brussels)
- OA24 Marine data management: assimilation, hind-casting and nowcasting**  
Convener: G. Evensen (Solheimsviken), Co-Convener: H. Gerritsen (Delft)
- OA25 Developments in weather forecasting**  
Convener: N. Gustafsson (Norrköping), Co-Convener: P. Benard (Toulouse)
- OA26 Will the probabilistic approach be the future for numerical weather predictions?**  
Convener: R. Buizza (Reading), Co-Convener: Z. Toth (Camp Springs, MD)
- NP1.03 Scaling, multifractals and nonlinearity in oceans & atmosphere (joint with OA)**  
Convener: F. Schmitt (Brussels), Co-Convener: R.F. Cahalan (Greenbelt, MD), V.V. Yanovsky (Kharkov)
- NH2.03 Flood hazards and flood risk: regional analysis of extremes (joint with OA)**  
Convener: P. Bois (St. Martin d'Heres), Co-Convener: V. Oancea (Bucharest)
- OA27 Marine tropospheric chemistry**  
Convener: T. Brauers (Jülich), Co-Convener: O. Schrems (Bremerhaven)

## VI. Solar-Terrestrial Sciences (ST)

- ST1 Review session on solar-terrestrial sciences**  
Convener: P. Fabian (Freising/Weihenstephan),  
Co-Convener: M.A. Hapgood (Oxfordshire)
- ST2 Open session on the middle atmosphere**  
(co-sponsored by OA)  
Convener: M. Dameris (Wessling), Co-Convener:  
B.C. Krüger (Lausanne)
- ST3 Open session on the ionosphere and thermosphere**  
Convener: D. Fontaine (Velizy), Co-Convener:  
K. Schlegel (Katlenburg-Lindau)
- ST4 Open session on the magnetosphere**  
Convener: M.J. Rycroft (Illkirch), Co-Convener:  
I. Sandahl (Kiruna)
- ST5 Open session on solar and heliospheric physics**  
Convener: R.G. Marsden (Noordwijk),  
Co-Convener: E. Marsch (Katlenburg-Lindau)
- ST6 Nonlinear dynamics in the heliosphere** (co-sponsored by NP)  
Convener: W.M. Macek (Warsaw),  
Co-Conveners: V. Carbone (Cosenza),  
R. Grappin (Meudon)
- ST7 Nonlinear processes in the ionosphere and magnetosphere** (co-sponsored by NP)  
Convener: M.J. Rycroft (Illkirch), Co-Convener:  
D. Fontaine (Velizy)
- ST8 The high-latitude ionosphere and magnetosphere: coupling and solar wind forcing**  
Convener: J. Woch (Katlenburg-Lindau),  
Co-Convener: J.-P. Villain (Orleans)
- ST9 Effects of geomagnetic storms and high-energy particle events on the ionosphere, thermosphere, and middle atmosphere**  
Convener: J. Lastovicka (Praha), Co-Convener:  
M. Förster (Potsdam)
- ST10 Ionospheric modelling and predictions**  
Convener: R. Hanbaba (Lannion), Co-Convener:  
B. Zolesi (Rome)
- ST11 New results on the dynamics of the Earth's magnetosphere from the Interball multi-spacecraft missions**  
Convener: J.-A. Sauvaud (Toulouse),  
Co-Convener: L.M. Zelenyi (Moscow)
- ST12 Theory and simulations of solar system plasmas**  
Convener: J. Büchner (Katlenburg-Lindau),  
Co-Convener: G. Belmont (Velizy)
- ST13 The Sun: SOHO and related results**  
**01 Plasma diagnosis of the solar atmosphere by photon spectroscopy and remote particle measurements**  
Convener: M. Hilchenbach (Katlenburg-Lindau), Co-Convener: V. Hansteen (Oslo)  
**02 Multi-wavelength observations of solar atmospheric structure, evolution and eruptions**  
Convener: R.A. Harrison (Oxfordshire),  
Co-Convener: J.-P. Delaboudiniere (Orsay)

## ST14

**Solar imprints in terrestrial archives**  
(co-sponsored by OA)  
Convener: G. Cini-Castagnoli (Torino)

## ST15

**Atmospheric ozone** (co-sponsored by OA)  
Convener: M.-M. Hirschberg (Freising/Weihenstephan)  
**01 Modelling and validation with satellite data**  
Convener: I.M. Vardavas (Crete),  
Co-Convener: F.W. Taylor (Oxford)  
**02 Polar ozone**  
Convener: A.A. Krivolutsky (Dolgoprudny)  
**03 Changes in UV-B radiation**  
Convener: B.C. Krüger (Lausanne)  
**04 Tropospheric ozone with emphasis on the Mediterranean region**  
Convener: C. Varotsos (Athens)  
**05 Ozone as a climate gas**  
Convener: K.P. Shine (Reading),  
Co-Convener: D.A. Hauglustaine (Boulder, CO)

## ST16

**Stratosphere-troposphere-exchange** (co-sponsored by OA)  
Convener: V. Wirth (München), Co-Convener:  
P.H. Haynes (Cambridge)

## ST17

**Aviation and space flight** (co-sponsored by OA)  
**01 Aviation impact on the atmosphere**  
Convener: H. Kelder (De Bilt), Co-Convener:  
R. Sausen (Wessling)  
**02 Air traffic meteorology and weather impact on aviation**  
Convener: T. Hauf (Wessling), Co-Conveners:  
J.-C. André (Toulouse), J.-M. Carriere (Toulouse), A. Corjon (Toulouse)  
**03 Air traffic meteorology**  
CANCELLED, papers included in ST17.2

## OA18

**Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere** (joint with ST)  
Convener: U. Platt (Heidelberg), Co-Convener:  
G.K. Moortgat (Mainz)

## OA19

**Free-radicals in the troposphere** (joint with ST)  
Convener: H.-P. Dorn (Jülich), Co-Convener:  
A. Volz-Thomas (Jülich)

## OA20

**Radiogenic isotopes as tracers of source-areas for aerosols, suspended matter and sediments** (joint with ST)  
Convener: F.E. Grousset (Talence), Co-Convener:  
F. Sirocko (Potsdam)

## NP3.05

**Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere** (joint with OA & ST)  
Convener: P.H. Haynes (Cambridge)

## VII. Planetary and Solar System Sciences (PS)

## PS1

**Planetary interiors**  
Convener: P. Lognonné (Saint Maur),  
Co-Convener: T.V. Gudkova (Moscow)

**PS2 Evolution and state of surfaces, crusts and lithospheres of planetary bodies**  
 Convener: P. Janle (Kiel), Co-Convener: A.T. Basilevsky (Moscow)

**PS3 Atmospheres of terrestrial planets, outer planets and moons**  
 Convener: F. Hourdin (Paris), Co-Convener: S.R. Lewis (Oxford)

**PS4 Planetary magnetospheres and ionospheres**  
 Convener: R. Prangé (Orsay), Co-Convener: M.K. Dougherty (London), K. Sauer (Katlenburg-Lindau)

**PS5 Small bodies of the solar system**  
 Convener: G.H. Schwehm (Noordwijk), Co-Convener: S. Ulamec (Köln)

**PS6 Solar system radiophysics and related topics**  
 Convener: C.H. Barrow (Katlenburg-Lindau), Co-Convener: M.G. Aubier (Meudon)

**PS7 Laboratory studies and observations on dust, ices and organics in the solar system**  
 Convener: P. Ehrenfreund (Leiden), Co-Convener: H. Kochan (Köln)

**PS8 Meteorites and cosmochemistry**  
 Convener: E. Jagoutz (Mainz), Co-Convener: F. Robert (Paris)

**PS9 Lunar exploration**  
 Convener: B.H. Foing (Noordwijk), Co-Convener: H. Hoffmann (Berlin)

**PS10 Interrelations between asteroids, near-Earth asteroids and meteorites**  
 Convener: C. Froeschlé (Nice), Co-Convener: A. Morbidelli (Nice)

**PS11 Observation of solar-system objects with ISO**  
 Convener: T. Encrenaz (Meudon), Co-Convener: E. Grün (Heidelberg)

**PS12 Planet formation and extra-solar planets**  
 Convener: P. Barge (Marseille), Co-Convener: G.E. Morfill (Garching)

**PS13 Mars Pathfinder Mission: Update**  
 Convener: H.U. Keller (Katlenburg-Lindau), Co-Convener: M.P. Golombek (Pasadena, CA), H. Wänke (Mainz)

#### VIII. Nonlinear Processes in Geophysics (NP)

**NP1 Scaling, multifractals and nonlinear variability in geophysics**  
 Convener: D. Schertzer (Paris), Co-Convener: S.M. Lovejoy (Montreal)

**01 Scaling, multifractals and nonlinearity in Solid Earth (co-sponsored by SE)**  
 Convener: J. Schmittbuhl (Paris), Co-Convener: P. Bak (Upton, NY), D.L. Turcotte (Ithaca, NY)

**02 Scaling, multifractals and nonlinearity in hydrology (co-sponsored by HS)**  
 Convener: C. Onof (London), Co-Convener: J. Olsson (Fukuoka), D. Veneziano (Cambridge, MA)

**03 Scaling, multifractals and nonlinearity in oceans & atmosphere (co-sponsored by OA)**  
 Convener: F. Schmitt (Brussels), Co-Convener: R.F. Cahalan (Greenbelt, MD), V.V. Yanovsky (Kharkov)

**04 Scaling, multifractals and natural/man-made hazards (co-sponsored by NH)**  
 Convener: G.S. Salvadori (Milano), Co-Convener: B.D. Malamud (Ithaca, NY)

**ST6 Nonlinear dynamics in the heliosphere (joint with NP)**  
 Convener: W.M. Macek (Warsaw), Co-Convener: V. Carbone (Cosenza), R. Grappin (Meudon)

**NP2 Predictability & time series analysis**

**01 Quantifying predictability**  
 Convener: Z. Toth (Camp Springs, MD)

**02 Execution and analysis of geophysical laboratory experiments**  
 Convener: S.P. Malinowski (Warsaw), Co-Convener: W.-G. Früh (Edinburgh)

**03 Nonlinear time series analysis**  
 Convener: J. Kurths (Potsdam), Co-Convener: P. Yiou (Gif-sur-Yvette)

**NP3 Transport and mixing in geophysical flows**  
 Convener: B. Legras (Paris)

**01 Transport and mixing in stably stratified fluid**  
 Convener: C. Staquet (Grenoble)

**02 Turbulence and mixing in geophysical flows, effects of stratification and rotation, convection, effect of coherent structures, Lagrangian chaos**  
 Convener: J.M. Redondo (Barcelona)

**03 Dispersion in two-dimensional flows, mixing, anomalous diffusion, experiments, models and numerical simulations**  
 Convener: P. Tabeling (Paris)

**04 Biological processes and mixing in the ocean (co-sponsored by OA)**  
 Convener: K.J. Richards (Southampton)

**05 Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere (co-sponsored by OA & ST)**  
 Convener: P.H. Haynes (Cambridge)

**06 Mixing in the interior of the Earth (recycling of subducted slabs) (co-sponsored by SE)**  
 Convener: Y. Ricard (Lyon)

**NP4 Nonlinear waves, coherent structures and natural hazards**

**01 Nonlinear waves, instabilities and wave-flow interactions**  
 Convener: V.I. Shrira (Cork), Co-Convener: L.A. Ostrovsky (Boulder, CO)

**02 Fluctuations, self-organization and natural hazards (co-sponsored by NH)**  
 Convener: S.S. Moiseev (Moscow), Co-Convener: L.A. Mendes-Victor (Lisboa)

**03 Shallow water experiments as models of geophysical and astrophysical flows**  
 Convener: J. Sommeria (Lyon), Co-Convener: M.V. Nezlin (Moscow)



- SE27** **Mechanics of tectonic and volcanic earthquakes** (*joint with NP*)  
Convener: J. Sileny (Praha), Co-Convener: G.F. Panza (Trieste)
- SE31** **Mechanics and thermofluid-dynamics of volcanic processes: modelling, observations and laboratory experiments** (*joint with NP*)  
Convener: G. de Natale (Napoli), Co-Conveners: P. Allard (Gif-sur-Yvette), M. Bonafede (Bologna)
- NH1.01** **Sea surges and storms** (*joint with NP*)  
Convener: A.R. Osborne (Torino), Co-Convener: S. Tinti (Bologna)
- ST7** **Nonlinear processes in the ionosphere and magnetosphere** (*joint with NP*)  
Convener: M.J. Rycroft (Ilkirsch), Co-Convener: D. Fontaine (Velizy)
- NP5** **Vortex dynamics**  
Convener: V. Zeitlin (Paris), Co-Convener: D.G. Dritschel (Cambridge)
- IX. Natural Hazards (NH)**
- NH1** **Extreme events in the sea and near shore and coastal hazards**
- 01** **Sea surges and storms** (*co-sponsored by NP*)  
Convener: A.R. Osborne (Torino), Co-Convener: S. Tinti (Bologna)
- 02** **Submarine landsliding**  
Convener: P. Heinrich (Bruyeres le Chatel), Co-Convener: C. Eva (Genova)
- 03** **Tsunamis**  
Convener: A. Piatanesi (Bruyeres le Chatel), Co-Convener: M.A. Baptista (Lisboa)
- NH2** **Meteorological and hydrological hazards** (*co-sponsored by HS*)
- 01** **Uncertainty assessment in meteo-hydrologic warning**  
Convener: E. Todini (Bologna), Co-Convener: F. Castelli (Perugia)
- 02** **Prediction of hazardous events of meteorological origin**  
Convener: S. Tibaldi (Bologna), Co-Convener: S. Alonso (Palma de Mallorca)
- 03** **Flood hazards and flood risk: regional analysis of extremes** (*co-sponsored by OA*)  
Convener: P. Bois (St. Martin d'Heres), Co-Convener: V. Oancea (Bucharest)
- 04** **Modelling and flood mapping in rural and urban areas**  
Convener: G. Oberlin (Lyon), Co-Convener: G. Roth (Genova)
- 05** **Shallow landslides and rainfall triggering**  
Convener: M. Sorriso-Valvo (Roges di Rende), Co-Convener: P. Versace (Montalto Uffugo Scalo)
- HSB1.02** **Influence of environmental and anthropogenic change on flood processes** (*joint with NH*)  
Convener: G. Blöschl (Wien), Co-Convener: P. Burlando (Zürich)
- NH3** **Earthquake risk mitigation** (*co-sponsored by SE*)
- 01** **Models and methods in seismic hazard assessment**  
Convener: T.M. Tsapanos (Thessaloniki), Co-Convener: C.V. Christova (Sofia)
- 02** **Seismic hazard evaluation in high seismicity areas by observing precursory phenomena**  
Convener: M.E. Contadakis (Thessaloniki), Co-Convener: J. Zschau (Potsdam)
- 03** **Macroseismics: present state of intensity-assessment procedures and future perspectives**  
Convener: A. Tertulliani (Rome), Co-Convener: I. Cecic (Ljubljana)
- 04** **Active fault and earthquake risk mitigation**  
Convener: A.A. Barka (Paris), Co-Convener: I.S. Stewart (Isleworth)
- 05** **Landslide hazards in seismically active regions**  
Convener: J. Wasowski (Bari), Co-Convener: V. Del Gaudio (Bari)
- 06** **Efficiency of building codes in the mitigation of the vulnerability**  
Convener: V. Petrini (Milano), Co-Convener: L.G. Pujades Beneit (Barcelona)
- 07** **Seismic microzonation in urban areas**  
Convener: A. Roca (Barcelona), Co-Convener: C.S. Oliveira (Lisboa)
- NH4** **Volcanic hazards: field studies, instrumentation and observation networks** (*co-sponsored by SE*)  
Convener: C. Kilburn (London), Co-Convener: G. Vougioukalakis (Athens)
- NH5** **Geomorphological hazards: extent, evaluation and mapping techniques**  
Convener: F. Guzzetti (Perugia), Co-Convener: R.J. Allison (Durham)
- NH6** **Transfer of the scientific information to the users**  
Convener: I. Becchi (Firenze), Co-Convener: F. Guzzetti (Perugia)
- NP1.04** **Scaling, multifractals and natural/man-made hazards** (*joint with NH*)  
Convener: G.S. Salvadori (Milano), Co-Convener: B.D. Malamud (Ithaca, NY)
- NP4.02** **Fluctuations, self-organization and natural hazards** (*joint with NH*)  
Convener: S.S. Moiseev (Moscow), Co-Convener: L.A. Mendes-Victor (Lisboa)
- X. Additional Symposia**
- STA** **Workshop on the EC TMR program: Scientific Training and Access to Aircraft for Atmospheric Research throughout Europe (STAAARTE): experiences-results-discussions**  
Convener: M. Krautstrunk (Wessling), Co-Conveners: D.R. Kindred (Farnborough), G. Penazzi (St. Maur des Fosses)

# Overall Schedule for Oral & Poster Sessions

## MONDAY, 20 APRIL - MORNING SESSIONS

EGS	<b>Geophysical and geological signatures of past and present climate change</b>			
	EGS2	R1	08.45	p. 65
	<b>Modelling techniques and joint inversion in Earth sciences</b>			
	EGS3	R4	09.00	p. 66
SE	<b>Open session on tectonophysics</b>			
	SE1	R2	08.30	p. 68
	<b>Variations in the Earth's rotation: implications for the dynamics and structure of the mantle and for global change processes</b>			
	SE7	R2	11.00	p. 72
	<b>Fault interaction and earthquake mechanics</b>			
	SE10	R3	08.30	p. 74
	<b>Active deformation along plate boundaries: measurements and models</b>			
	SE17.2	Gallieni 5	09.00	p. 81
	<b>The Trans European Suture Zone (TESZ)I</b>			
	SE19	Hermes	08.30	p. 83
	<b>Mechanics and thermalfluid-dynamics of volcanic processes: modelling, observations and laboratory experiments</b>			
	SE31	Athena	08.30	p. 92
G	<b>Archaeomagnetism and secular variations</b>			
	SE35.2	R11	08.30	p. 103
	<b>Electro-magnetic and electro-kinetic properties of rocks: integration of laboratory, borehole and field measurements</b>			
	SE41	R8	11.00	p. 112
	<b>Collisional and transform plate boundaries and subduction zones</b>			
	SE47.4	R9	08.45	p. 117
HS	<b>Geophysical applications of radar interferometry</b>			
	G3	R9	11.00	p. 123
	<b>Joint EGS/AGU Symposium on geodetic observation and geophysical interpretation of mass movements in the Earth system - Introduction</b>			
	G7	R5	08.30	p. 127
	<b>Solid Earth and core</b>			
	G7.1	R5	10.45	p. 127
	<b>Instrumental challenges in geodesy</b>			
	G15	R7	09.00	p. 134
OA	<b>Geodetic and geodynamic achievements of the CEI (Central European Initiative)</b>			
	G16	R10	08.30	p. 136
	<b>Identification of model parameters in ground-water hydrology</b>			
	HSA1.2	Gallieni 3	09.00	p. 140
	<b>Morphological processes at the hillslope and river scale</b>			
OA	HSA2.2	Mykonos	08.45	p. 143
	<b>Sediment and contaminant transfers at the land/ocean interface</b>			
	HSA2.3	Mykonos	11.00	p. 144
	<b>Open session on hydrology and surface hydrological processes</b>			
	HSA5	Gallieni 2	08.30	p. 145
OA	<b>Open session on coastal/shelf-sea dynamics</b>			
	OA5	Uranie	08.30	p. 167
OA	<b>Dynamics of the polar ocean and its coupling to sea ice I</b>			
	OA6	Calliope	08.30	p. 169
	<b>Extreme weather events in the Mediterranean</b>			
	OA12	Thalie	11.00	p. 178
	<b>Intercomparison and validation of the ocean-atmosphere flux fields I</b>			
	OA14.1	Erato	09.00	p. 181
	<b>West African monsoon studies</b>			
	OA17.1	Euterpe	08.30	p. 188
	<b>Biogeochemical interactions in the coastal marine environment</b>			
	OA21	Clio	08.30	p. 198
ST	<b>Developments in weather forecasting I</b>			
	OA25	Thalie	08.30	p. 202
	<b>Review session on solar-terrestrial sciences</b>			
ST	ST1	M7	11.00	p. 207
	<b>Open session on solar and heliospheric physics I</b>			
	ST5	M5	09.00	p. 213
	<b>Effects of geomagnetic storms and high-energy particle events on the ionosphere, thermosphere, and middle atmosphere</b>			
	ST9	M6	09.00	p. 218
	<b>Aviation impact on the atmosphere</b>			
	ST17.1	M8	08.30	p. 232
PS	<b>Evolution and state of surfaces, crusts and lithospheres of planetary bodies I</b>			
	PS2	M1	11.00	p. 236
	<b>Meteorites and cosmochemistry</b>			
	PS8	M1	09.00	p. 245
	<b>Interrelations between asteroids, near-Earth asteroids and meteorites</b>			
	PS10	M4	09.00	p. 246
	<b>Observation of solar-system objects with ISO I</b>			
	PS11	M2	09.00	p. 246
NP	<b>Scaling, multifractals and nonlinearity in Solid Earth</b>			
	NP1.1	M9	09.00	p. 252
	<b>Dispersion in two-dimensional flows, mixing, anomalous diffusion, experiments, models and numerical simulations</b>			
	NP3.3	M3	09.00	p. 259
	<b>Shallow water experiments as models of geophysical and astrophysical flows</b>			
	NP4.3	Iris	08.30	p. 265
	<b>Submarine landsliding</b>			
NH	NH1.2	Studio	11.00	p. 267
	<b>Models and methods in seismic hazard assessment</b>			
	NH3.1	R6	09.00	p. 271
<b>Opening &amp; Award Ceremony and Society Lecture</b>				
<b>Lecture Theatre Apollon</b>				
17.00 Opening Ceremony				
17.15 Award Ceremony				
18.00 Inauguration of the new EGS and Section Presidents				
18.15 Society Lecture				
19.30 Reception				

# MONDAY, 20 APRIL - AFTERNOON SESSIONS

<b>EGS</b>	<b>Modelling techniques and joint inversion in Earth sciences</b>				
EGS3	R4	14.00	p. 66		
<b>SE</b>	<b>Variations in the Earth's rotation: implications for the dynamics and structure of the mantle and for global change processes</b>				
SE7	R2	14.00	p. 72		
	<b>Fault interaction and earthquake mechanics</b>				
SE10	R3	14.00	p. 75		
	<b>Active deformation along plate boundaries: measurements and models</b>				
SE17.2	Gallieni 5	14.00	p. 81		
	<b>The Trans European Suture Zone (TESZ)I</b>				
SE19	Hermes	14.00	p. 83		
	<b>Mechanics and thermalfluid-dynamics of volcanic processes: modelling, observations and laboratory experiments</b>				
SE31	Athena	14.00	p. 93		
	<b>Archaeological prospection</b>				
SE35.1	R11	14.00	p. 102		
	<b>Electro-magnetic and electro-kinetic properties of rocks: integration of laboratory, borehole and field measurements</b>				
SE41	R8	14.00	p. 112		
	<b>Spontaneous globally synchronized variations of physical parameters</b>				
SE52	R1	14.00	p. 120		
<b>G</b>	<b>Solid Earth and core</b>				
G7.1	R5	14.00	p. 127		
	<b>Ocean and hydrosphere</b>				
G7.2	R5	14.30	p. 127		
	<b>Instrumental challenges in geodesy</b>				
G15	R7	14.00	p. 135		
	<b>Geodetic and geodynamic achievements of the CEI (Central European Initiative)</b>				
G16	R10	14.00	p. 136		
<b>HS</b>	<b>Identification of model parameters in groundwater hydrology</b>				
HSA1.2	Gallieni 3	14.00	p. 140		
	<b>Measurement of bedload and suspended sediment in turbulent flow</b>				
HSA2.1	Mykonos	14.00	p. 143		
	<b>Open session on hydrology and surface hydrological processes</b>				
HSA5	Gallieni 2	14.00	p. 146		
<b>OA</b>	<b>Open session on coastal/shelf-sea dynamics</b>				
OA5	Uranie	14.00	p. 168		
	<b>Dynamics of the polar ocean and its coupling to sea ice I</b>				
OA6	Calliope	14.00	p. 169		
	<b>Extreme weather events in the Mediterranean</b>				
OA12	Thalie	14.00	p. 179		
	<b>Intercomparison and validation of the ocean-atmosphere flux fields I</b>				
OA14.1	Erato	14.00	p. 181		
	<b>Interaction of biogenic and anthropogenic compounds in the Mediterranean and its influence on atmospheric chemistry I</b>				
OA16	Clio	14.00	p. 186		
	<b>Clouds in the climate system: observations and modelling</b>				
OA17.4	Euterpe	14.00	p. 192		
<b>ST</b>	<b>Open session on the middle atmosphere I</b>				
ST2	M7	14.00	p. 207		
<b>ST</b>	<b>Open session on solar and heliospheric physics I</b>				
ST5	M5	14.00	p. 213		
	<b>Effects of geomagnetic storms and high-energy particle events on the ionosphere, thermosphere, and middle atmosphere</b>				
ST9	M6	14.00	p. 218		
	<b>Air traffic meteorology and weather impact on aviation I</b>				
ST17.2	M8	14.00	p. 233		
<b>PS</b>	<b>Evolution and state of surfaces, crusts and lithospheres of planetary bodies I</b>				
PS2	M1	14.00	p. 237		
	<b>Solar system radiophysics &amp; related topics I</b>				
PS6	M4	14.00	p. 242		
	<b>Observation of solar-system objects with ISO I</b>				
PS11	M2	14.00	p. 247		
<b>NP</b>	<b>Scaling, multifractals and nonlinearity in hydrology</b>				
NP1.2	M9	14.00	p. 252		
	<b>Execution and analysis of geophysical laboratory experiments</b>				
NP2.2	Iris	14.00	p. 256		
	<b>Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere I</b>				
NP3.5	M3	14.00	p. 260		
	<b>Mixing in the interior of the Earth I</b>				
NP3.6	M3	15.45	p. 262		
<b>NH</b>	<b>Uncertainty assessment in meteo-hydrologic warning</b>				
NH2.1	Studio	14.00	p. 268		
	<b>Active fault and earthquake risk mitigation</b>				
NH3.4	R6	14.00	p. 274		

## Video & PC Points

### Video (multinorm VHS)

AGORA2- HS Area (lifts close to Apollon)  
RHODES - SE Area (escalator to Méditerranée)  
LES MUSES - OA Area (next to exit/entrance)

### Personal Computer

RHODES - SE Area (escalator to Méditerranée)

Tuesday-Thursday, 21-23 April, 08.00-19.00/19.30

## Open Section/IWG Business Meetings

Wednesday, 22 April, 12.00-14.00

SE:	R10	ST:	M8
G:	R5	PS:	M4
HS:	Gallieni 3	NP:	M3
OA:	Clio	NH:	R1

Sandwiches & Refreshments are complimentary

## TUESDAY, 21 APRIL - MORNING SESSIONS

<b>EGS</b>	<b>Tectonics, structure and dynamics of the Alpine-Mediterranean System</b>			
EGS1.1	Athena	09.00	p. 63	
<b>SE</b>	<b>Post-glacial rebound and its influence on sea level, crustal deformation and gravity: new observations, modelling results and initiatives</b>			
SE6	R3	11.00	p. 71	
	<b>Lithospheric dynamic processes as seen from geomorphology</b>			
SE11	R2	11.00	p. 75	
	<b>Crustal structure revealed by scientific drilling</b>			
SE15	R3	08.45	p. 78	
	<b>Seismological studies in convergent plate margins</b>			
SE17.3	R2	08.45	p. 82	
	<b>The Trans European Suture Zone (TESZ)II</b>			
SE19	Hermes	08.30	p. 84	
	<b>Images of the continental lithosphere by active seismic methods</b>			
SE22	R1	11.00	p. 86	
	<b>Seismic rupture processes: confrontation of observations and theory</b>			
SE24	R9	08.30	p. 88	
	<b>The Umbria-Marche earthquake sequence of 1997: first results</b>			
SE24.1	R9	11.00	p. 89	
	<b>Open session on volcanology, geochemistry and petrology</b>			
SE28	R1	08.45	p. 92	
	<b>Effect of chemical alteration on magnetization</b>			
SE34.3	R4	09.00	p. 98	
	<b>Potential fields in geodesy, geophysics and geology I</b>			
SE36	Hermes	11.00	p. 104	
	<b>Physical properties of mudrocks</b>			
SE39.6	R11	11.00	p. 111	
	<b>Rifted margins</b>			
SE47.1	R10	08.45	p. 115	
<b>G</b>	<b>Cryosphere</b>			
G7.3	R5	08.30	p. 128	
	<b>Atmosphere</b>			
G7.4	R5	09.45	p. 128	
	<b>Interactions between the components of the Earth system</b>			
G7.5	R5	11.30	p. 128	
	<b>Recent advances in precise geoid determination methodology</b>			
G11	R8	09.00	p. 131	
	<b>Contribution of permanent geodetic network to Earth Science in Europe</b>			
G14	R7	09.00	p. 133	
<b>HS</b>	<b>Reactive mass transport: experimental studies of chemical, colloidal and biological processes</b>			
HSA1.3	Gallieni 3	11.00	p. 141	
	<b>Open session on hydrology and weather</b>			
HSA4	Gallieni 2	09.00	p. 145	
	<b>Recent advances in tracers in vadose zone hydrology</b>			
HSA6.1	Mykonos	08.45	p. 147	
	<b>Catchment management in the Mediterranean for efficient water use</b>			
HSC1.5	Gallieni 3	08.30	p. 160	
<b>OA</b>	<b>The thermohaline circulation I</b>			
OA1	Calliope	11.00	p. 161	
<b>OA</b>	<b>Dynamics of the polar ocean and its coupling to sea ice II</b>			
OA6	Calliope	08.30	p. 170	
	<b>The Mediterranean Sea: general circulation variability and related processes</b>			
OA8	Uranie	08.30	p. 172	
	<b>Mesoscale transport of air pollution, including land/sea areas</b>			
OA11	Erato	11.00	p. 177	
	<b>Intercomparison and validation of the ocean-atmosphere flux fields II</b>			
OA14.1	Erato	08.45	p. 182	
	<b>Interaction of biogenic and anthropogenic compounds in the Mediterranean and its influence on atmospheric chemistry II</b>			
OA16	Clio	08.30	p. 187	
	<b>Prediction and detection of anthropogenic climate change</b>			
OA17.5	Euterpe	08.30	p. 193	
	<b>Free-radicals in the troposphere</b>			
OA19	Clio	11.00	p. 196	
	<b>Developments in weather forecasting II</b>			
OA25	Thalie	08.30	p. 202	
<b>ST</b>	<b>Open session on the middle atmosphere II</b>			
ST2	M7	08.30	p. 207	
	<b>Open session on solar and heliospheric physics II</b>			
ST5	M5	09.00	p. 213	
	<b>Nonlinear dynamics in the heliosphere</b>			
ST6	Gallieni 5	08.45	p. 215	
	<b>The high-latitude ionosphere and magnetosphere: coupling and solar wind forcing</b>			
ST8	M6	08.45	p. 216	
	<b>Air traffic meteorology and weather impact on aviation II</b>			
ST17.2	M8	08.30	p. 234	
<b>PS</b>	<b>Evolution and state of surfaces, crusts and lithospheres of planetary bodies II</b>			
PS2	M1	08.30	p. 237	
	<b>Atmospheres of terrestrial planets, outer planets and moons I</b>			
PS3	M1	11.00	p. 238	
	<b>Solar system radiophysics and related topics II</b>			
PS6	M4	08.45	p. 242	
	<b>Observation of solar-system objects with ISO II</b>			
PS11	M2	09.00	p. 247	
	<b>Mars Pathfinder Mission: Update I</b>			
PS13	Iris	08.30	p. 249	
<b>NP</b>	<b>Scaling, multifractals and nonlinearity in oceans &amp; atmosphere</b>			
NP1.3	M9	09.00	p. 253	
	<b>Transport and mixing in stably stratified fluid</b>			
NP3.1	M3	10.00	p. 257	
	<b>Mixing in the interior of the Earth (recycling of subducted slabs) II</b>			
NP3.6	M3	08.30	p. 263	
<b>NH</b>	<b>Sea surges and storms</b>			
NH1.1	R6	08.30	p. 267	
	<b>Tsunamis</b>			
NH1.3	R6	11.00	p. 267	
	<b>Prediction of hazardous events of meteorological origin</b>			
NH2.2	Studio	09.00	p. 268	

## TUESDAY, 21 APRIL - AFTERNOON SESSIONS

<b>EGS</b>	<b>Tectonics, structure and dynamics of the Alpine-Mediterranean System</b>				
EGS1.1	Athena	14.00	p. 63		
	<b>Geophysical and geological signatures of past and present climate change - Posters</b>				
EGS2	RHODES-SE	17.00	p. 66		
	<b>Modelling techniques and joint inversion in Earth sciences - Posters</b>				
EGS3	RHODES-SE	17.00	p. 67		
<b>SE</b>	<b>Open session on tectonophysics - Posters</b>				
SE1	RHODES-SE	17.00	p. 68		
	<b>Post-glacial rebound and its influence on sea level, crustal deformation and gravity: new observations, modelling results and initiatives</b>				
SE6	R3	14.00	p. 71		
	<b>Post-glacial rebound and its influence on sea level, crustal deformation and gravity: new observations, modelling results and initiatives - Posters</b>				
SE6	RHODES-SE	17.00	p. 72		
	<b>Variations in the Earth's rotation: implications for the dynamics and structure of the mantle and for global change processes - Posters</b>				
SE7	RHODES-SE	17.00	p. 72		
	<b>Fault interaction and earthquake mechanics - Posters</b>				
SE10	RHODES-SE	17.00	p. 75		
	<b>Lithospheric dynamic processes as seen from geomorphology - Posters</b>				
SE11	RHODES-SE	17.00	p. 75		
	<b>Crustal structure revealed by scientific drilling - Posters</b>				
SE15	RHODES-SE	17.00	p. 79		
	<b>Active deformation along plate boundaries: measurements and models - Posters</b>				
SE17.2	RHODES-SE	17.00	p. 82		
	<b>Seismological studies in convergent plate margins - Posters</b>				
SE17.3	RHODES-SE	17.00	p. 82		
	<b>The Trans European Suture Zone (TESZ) - Posters</b>				
SE19	RHODES-SE	17.00	p. 84		
	<b>Images of the continental lithosphere by active seismic methods</b>				
SE22	R1	14.00	p. 86		
	<b>Images of the continental lithosphere by active seismic methods - Posters</b>				
SE22	RHODES-SE	17.00	p. 87		
	<b>Seismic rupture processes: confrontation of observations and theory - Posters</b>				
SE24	RHODES-SE	17.00	p. 89		
	<b>The Umbria-Marche earthquake sequence of 1997: first results - Posters</b>				
SE24.1	RHODES-SE	17.00	p. 89		
	<b>3-D seismic modelling and high performance computing</b>				
SE26	Thalie	14.00	p. 91		
	<b>Mechanics and thermofluid-dynamics of volcanic processes: modelling, observations and laboratory experiments - Posters</b>				
SE31	RHODES-SE	17.00	p. 93		
	<b>New challenges in rockmagnetism, palaeomagnetism and environmental magnetism</b>				
SE34.1	R4	14.05	p. 96		
	<b>New challenges in rockmagnetism, palaeomagnetism and environmental magnetism - Posters</b>				
SE34.1	RHODES-SE	17.00	p. 96		
<b>SE</b>	<b>Effect of chemical alteration on magnetization - Posters</b>				
SE34.3	RHODES-SE	17.00	p. 99		
	<b>Archaeological prospection - Posters</b>				
SE35.1	RHODES-SE	17.00	p. 103		
	<b>Archaeomagnetism and secular variations - Posters</b>				
SE35.2	RHODES-SE	17.00	p. 104		
	<b>Potential fields in geodesy, geophys. &amp; geology I</b>				
SE36	Hermes	14.00	p. 104		
	<b>Potential fields in geodesy, geophysics and geology - Posters</b>				
SE36	RHODES-SE	17.00	p. 105		
	<b>Physical properties of mudrocks</b>				
SE39.6	R11	14.00	p. 111		
	<b>Electro-magnetic and electro-kinetic properties of rocks: integration of laboratory, borehole and field measurements - Posters</b>				
SE41	RHODES-SE	17.00	p. 112		
	<b>Physical properties of fault zones</b>				
SE42	R2	14.00	p. 113		
	<b>Rifted margins</b>				
SE47.1	R10	14.00	p. 116		
	<b>Rifted margins - Posters</b>				
SE47.1	RHODES-SE	17.00	p. 116		
	<b>Marine magnetics 35 years after Vine-Matthews-Morley discovery (in memory of D. Matthews)</b>				
SE49	R9	14.00	p. 119		
	<b>Spontaneous globally synchronized variations of physical parameters - Posters</b>				
SE52	RHODES-SE	17.00	p. 121		
<b>G</b>	<b>Environmental effects on gravity and intercomparisons with other techniques - Posters</b>				
G1	AGORA2-G	17.00	p. 122		
	<b>Geophysical applications of radar interferometry - Posters</b>				
G3	AGORA2-G	17.00	p. 123		
	<b>Interactions between the components of the Earth system</b>				
G7.5	R5	14.00	p. 128		
	<b>Recent advances in precise geoid determination methodology</b>				
G11	R8	14.00	p. 131		
	<b>Recent advances in precise geoid determination methodology - Posters</b>				
G11	AGORA2-G	17.00	p. 131		
	<b>Contribution of permanent geodetic network to Earth Science in Europe</b>				
G14	R7	14.00	p. 134		
	<b>Contribution of permanent geodetic network to Earth Science in Europe - Posters</b>				
G14	AGORA2-G	17.30	p. 134		
	<b>Instrumental challenges in geodesy - Posters</b>				
G15	AGORA2-G	17.00	p. 135		
	<b>Geodetic and geodynamic achievements of the CEI (Central European Initiative) - Posters</b>				
G16	AGORA2-G	17.00	p. 137		
<b>HS</b>	<b>Reactive mass transport: experimental studies of chemical, colloidal and biological processes</b>				
HSA1.3	Gallieni 3	14.00	p. 141		
	<b>Open session on hydrology and weather</b>				
HSA4	Gallieni 2	14.00	p. 145		
	<b>Open session on hydrology and surface hydrological processes - Posters</b>				
HSA5	AGORA2-HS	17.00	p. 146		
	<b>Hydrology and soil processes - Posters</b>				
HSA6	AGORA2-HS	17.00	p. 147		

## TUESDAY, 21 APRIL - AFTERNOON SESSIONS CONT.

<b>HS</b>	<b>Scale problems of soil hydrological measuring techniques</b> HSA6.2 Mykonos 14.00 p. 148	<b>ST</b>	<b>Plasma diagnosis of the solar atmosphere by photon spectroscopy and remote particle measurements I</b> ST13.1 M5 14.00 p. 223
<b>OA</b>	<b>The thermohaline circulation I</b> OA1 Calliope 14.00 p. 161 <b>Open session on coastal/shelf-sea dynamics - Post.</b> OA5 LES MUSES 17.00 p. 158 <b>Dynamics of the polar ocean and its coupling to sea ice - Posters</b> OA6 LES MUSES 17.00 p. 170 <b>The Mediterranean Sea: general circulation variability and related processes</b> OA8 Uranie 14.00 p. 172 <b>The Mediterranean Sea: general circulation variability and related processes - Posters</b> OA8 LES MUSES 17.00 p. 173 <b>Mesoscale transport of air pollution, including land/sea areas</b> OA11 Erato 14.00 p. 177 <b>Mesoscale transport of air pollution, including land/sea areas - Posters</b> OA11 LES MUSES 17.30 p. 178 <b>Extreme weather events in the Mediterranean - Posters</b> OA12 LES MUSES 17.00 p. 179 <b>Interaction of biogenic and anthropogenic compounds in the Mediterranean and its influence on atmospheric chemistry - Posters</b> OA16 LES MUSES 17.00 p. 187 <b>Climate variability: models and observations</b> OA17 Euterpe 14.00 p. 188 <b>Free-radicals in the troposphere</b> OA19 Clio 14.00 p. 196 <b>Free-radicals in the troposphere - Posters</b> OA19 LES MUSES 17.00 p. 197 <b>Biogeochemical interactions in the coastal marine environment - Posters</b> OA21 LES MUSES 17.00 p. 199 <b>Developments in weather forecasting - Posters</b> OA25 LES MUSES 17.00 p. 203		<b>Aviation impact on the atmosphere - Posters</b> ST17.1 AGORA3-ST 17.00 p. 233 <b>Air traffic meteorology and weather impact on aviation II</b> ST17.2 M8 14.00 p. 234 <b>Air traffic meteorology and weather impact on aviation II - Posters</b> ST17.2 AGORA3-ST 17.30 p. 235
		<b>PS</b>	<b>Evolution and state of surfaces, crusts and lithospheres of planetary bodies - Posters</b> PS2 AGORA3-PS 17.00 p. 237 <b>Atmospheres of terrestrial planets, outer planets and moons I</b> PS3 M1 14.00 p. 238 <b>Observation of solar-system objects with ISO - Posters</b> PS11 AGORA3-PS 17.00 p. 247 <b>Planet formation and extra-solar planets I</b> PS12 M4 14.00 p. 248 <b>Mars Pathfinder Mission: Update I</b> PS13 Iris 14.00 p. 249 <b>Mars Pathfinder Mission: Update I - Posters</b> PS13 AGORA3-PS 17.00 p. 250
		<b>NP</b>	<b>Scaling, multifractals and nonlinearity in Solid Earth - Posters</b> NP1.1 AGORA3-NP 17.00 p. 252 <b>Scaling, multifractals and nonlinearity in hydrology - Posters</b> NP1.2 AGORA2-NP 17.00 p. 253 <b>Scaling, multifractals and nonlinearity in oceans &amp; atmosphere</b> NP1.3 M9 14.00 p. 254 <b>Scaling, multifractals and nonlinearity in oceans &amp; atmosphere - Posters</b> NP1.3 AGORA3-NP 17.30 p. 254 <b>Scaling, multifractals and natural/man-made hazards - Posters</b> NP1.4 AGORA3-NP 17.00 p. 254 <b>Transport and mixing in stably stratified fluid</b> NP3.1 M3 14.00 p. 257 <b>Transport and mixing in stably stratified fluid - Posters</b> NP3.1 AGORA3-NP 17.30 p. 258 <b>Dispersion in two-dimensional flows, mixing, anomalous diffusion, experiments, models and numerical simulations - Posters</b> NP3.3 AGORA3-NP 17.00 p. 259 <b>Shallow water experiments as models of geophysical and astrophysical flows - Posters</b> NP4.3 AGORA3-NP 17.00 p. 265
<b>ST</b>	<b>Review session on solar-terrestrial sciences - Posters</b> ST1 AGORA3-ST 17.00 p. 207 <b>Open session on the middle atmosphere II</b> ST2 M7 14.00 p. 208 <b>Open session on the middle atmosphere II - Post.</b> ST2 AGORA3-ST 17.00 p. 208 <b>Open session on solar and heliospheric physics - Posters</b> ST5 AGORA3-ST 17.00 p. 214 <b>Nonlinear dynamics in the heliosphere</b> ST6 Gallieni 5 14.00 p. 215 <b>Nonlinear dynamics in the heliosphere - Posters</b> ST6 AGORA3-ST 17.00 p. 215 <b>The high-latitude ionosphere and magnetosphere: coupling and solar wind forcing</b> ST8 M6 14.00 p. 217 <b>The high-latitude ionosphere and magnetosphere: coupling and solar wind forcing - Posters</b> ST8 AGORA3-ST 17.30 p. 217 <b>Effects of geomagnetic storms and high-energy particle events on the ionosphere, thermosphere, and middle atmosphere - Posters</b> ST9 AGORA3-ST 17.00 p. 218 <b>New results on the dynamics of the Earth's magnetosphere from the Interball multi-spacecraft missions I</b> ST11 M2 14.00 p. 220	<b>NH</b>	<b>Models and methods in seismic hazard assessment - Posters</b> NH3.1 RHODES-NH 17.00 p. 272 <b>Active fault and earthquake risk mitigation - Posters</b> NH3.4 RHODES-NH 17.00 p. 275 <b>Efficiency of building codes in the mitigation of the vulnerability</b> NH3.6 R6 14.00 p. 276 <b>Transfer of the scientific information to the users</b> NH6 Studio 14.00 p. 279

# WEDNESDAY, 22 APRIL - MORNING SESSIONS

<b>EGS</b>	<b>Evolution of the African-Eurasian plate boundary</b>			
EGS1.2	Athena	09.00	p. 63	
<b>SE</b>	<b>Geodynamics of the lithosphere: images and models of active tectonics</b>			
SE5	R3	08.45	p. 70	
	<b>Modern rifts: plumes, kinematic conditions and lithospheric inhomogeneities</b>			
SE14	R9	09.00	p. 77	
	<b>Open session on seismology</b>			
SE21	R2	09.00	p. 85	
	<b>Sediment magnetic records of climatic cycles and events</b>			
SE34.4	R4	09.00	p. 99	
	<b>Potential fields in geodesy, geophysics and geology II</b>			
SE36	Gallieni 5	09.00	p. 105	
	<b>Physical properties of partially molten rocks</b>			
SE39.5	R11	08.40	p. 111	
	<b>Processes of crustal accretion at mid-oceanic-ridges</b>			
SE47.3	R10	09.00	p. 116	
	<b>Recent marine geological and geophysical investigation in the Mediterranean and Black Sea</b>			
SE50	R1	09.00	p. 119	
<b>G</b>	<b>Recent crustal movements of coastal regions: new geodetic, geologic and geophysical results</b>			
G2	R8	09.00	p. 122	
	<b>Integrated studies of sea-level fluctuations and crustal movements in the Mediterranean and adjacent regions</b>			
G8	R5	09.00	p. 129	
	<b>Atmospheric sounding with GPS</b>			
G9	R7	08.30	p. 129	
<b>HS</b>	<b>Characterization and modelling of the 2-D and 3-D structure of porous and fractured formations</b>			
HSA1.1	Gallieni 3	08.40	p. 139	
	<b>Open session on hydrology and climate</b>			
HSA3	Gallieni 2	09.00	p. 144	
	<b>Water resources of international river basins</b>			
HSB1.1	Mykonos	09.00	p. 153	
	<b>The French National Programme in Hydrology</b>			
HSC1.1	Hermes	08.45	p. 157	
<b>OA</b>	<b>The thermohaline circulation II</b>			
OA1	Calliope	09.00	p. 161	
	<b>Surface fluxes in non-homogeneous terrain</b>			
OA10.1	Thalie	09.00	p. 174	
	<b>Major systematic errors in global coupled models</b>			
OA14.2	Erato	09.00	p. 183	
<b>OA</b>	<b>Climate variability: time scale interactions I</b>			
OA17.3	Euterpe	08.30	p. 190	
	<b>Radiogenic isotopes as tracers of source-areas for aerosols, suspended matter and sediments</b>			
OA20	Clio	08.30	p. 198	
	<b>Operational oceanography: existing systems, developments and future potential</b>			
OA23	Uranie	09.00	p. 200	
<b>ST</b>	<b>Nonlinear processes in the ionosphere and magnetosphere</b>			
ST7	M8	09.00	p. 215	
	<b>New results on the dynamics of the Earth's magnetosphere from the Interball multi-spacecraft missions II</b>			
ST11	M7	09.00	p. 220	
	<b>Plasma diagnosis of the solar atmosphere by photon spectroscopy and remote particle measurements II</b>			
ST13.1	M5	09.00	p. 224	
	<b>Stratosphere-troposphere-exchange I</b>			
ST16	M6	08.45	p. 230	
<b>PS</b>	<b>Atmospheres of terrestrial planets, outer planets and moons II</b>			
PS3	M1	08.30	p. 239	
	<b>Laboratory studies and observations on dust, ices and organics in the solar system I</b>			
PS7	M9	08.45	p. 243	
	<b>Planet formation and extra-solar planets II</b>			
PS12	M4	09.00	p. 248	
	<b>Mars Pathfinder Mission: Update II</b>			
PS13	Iris	09.00	p. 251	
<b>NP</b>	<b>Nonlinear time series analysis</b>			
NP2.3	M2	08.30	p. 256	
	<b>Turbulence and mixing in geophysical flows, effects of stratification and rotation, convection, effect of coherent structures, Lagrangian chaos</b>			
NP3.2	M3	09.00	p. 258	
<b>NH</b>	<b>Flood hazards and flood risk: regional analysis of extremes</b>			
NH2.3	Studio	08.30	p. 269	
	<b>Modelling and flood mapping in rural and urban areas</b>			
NH2.4	Studio	10.30	p. 269	
	<b>Seismic hazard evaluation in high seismicity areas by observing precursory phenomena</b>			
NH3.2	R6	08.30	p. 272	

# WEDNESDAY, 22 APRIL - AFTERNOON SESSIONS

<b>EGS</b>	<b>Evolution of the African-Eurasian plate boundary</b>			
EGS1.2	Athena	14.00	p. 63	
	<b>Evolution of the African-Eurasian plate boundary - Posters</b>			
EGS1.2	RHODES-SE	17.00	p. 64	
<b>SE</b>	<b>Geodynamics of the lithosphere: images and models of active tectonics</b>			
SE5	R3	14.00	p. 70	
	<b>Geodynamics of the lithosphere: images and models of active tectonics - Posters</b>			
SE5	RHODES-SE	17.00	p. 70	
<b>SE</b>	<b>Modern rifts: plumes, kinematic conditions and lithospheric inhomogeneities</b>			
SE14	R9	14.00	p. 77	
	<b>Modern rifts: plumes, kinematic conditions and lithospheric inhomogeneities - Posters</b>			
SE14	RHODES-SE	17.00	p. 78	
	<b>Crustal melting in nature and experiment</b>			
SE32	R2	14.00	p. 94	
	<b>Sediment magnetic records of climatic cycles and events</b>			
SE34.4	R4	14.00	p. 99	

# WEDNESDAY, 22 APRIL - AFTERNOON SESSIONS CONT.

SE	Sediment magnetic records of climatic cycles and events - Posters			OA	Cyclogenesis and fronts: FASTEX I		
	SE34.4	RHODES-SE	17.00		OA13	Clio	14.00
	Potential fields in geodesy, geophysics and geology II				Major systematic errors in global coupled models		
	SE36	Gallieni 5	14.00		OA14.2	Erato	14.00
	Open session on physical properties of geomaterials - Posters				Sensitivity of radiative perturbations in global coupled models		
	SE39.1	RHODES-SE	17.00		OA14.3	Erato	15.15
	Pore pressure as a geomechanical and geophysical parameter				Climate variability: models and observations - Posters		
	SE39.4	R11	14.00		OA17	LES MUSES	17.00
	Physical properties of mudrocks - Posters				Climate variability: time scale interactions I		
	SE39.6	RHODES-SE	17.00		OA17.3	Euterpe	14.00
	Open session on marine geophysics - Posters				Operational oceanography: existing systems, developments and future potential		
	SE46	RHODES-SE	17.00		OA23	Uranie	14.00
	Processes of crustal accretion at mid-oceanic-ridges				Operational oceanography: existing systems, developments and future potential - Posters		
SE47.3	R10	14.00	OA23	LES MUSES	17.00		
Recent marine geological and geophysical investigation in the Mediterranean and Black Sea			ST	Nonlinear processes in the ionosphere and magnetosphere			
SE50	R1	14.00		ST7	M8	14.00	
Recent marine geological and geophysical investigation in the Mediterranean and Black Sea - Posters				Nonlinear processes in the ionosphere and magnetosphere - Posters			
SE50	RHODES-SE	17.30		ST7	AGORA3-ST	17.00	
Environmental effects on gravity and intercomparisons with other techniques				New results on the dynamics of the Earth's magnetosphere from the Interball multi-spacecraft missions - Posters			
G1	R7	14.00		ST11	AGORA3-ST	17.00	
Recent crustal movements of coastal regions: new geodetic, geologic and geophysical results				Multi-wavelength observations of solar atmospheric structure, evolution and eruptions I			
G2	R8	14.00		ST13.2	M5	14.00	
Integrated studies of sea-level fluctuations and crustal movements in the Mediterranean and adjacent regions				Multi-wavelength observations of solar atmospheric structure, evolution and eruptions I - Posters			
G8	R5	14.00		ST13.2	AGORA3-ST	17.00	
Hydrology and the Earth's crust - Posters				Modelling and validation with satellite data I			
HSA1	AGORA2-HS	17.00		ST15.1	M7	14.00	
Characterization and modelling of the 2-D and 3-D structure of porous and fractured formations				Stratosphere-troposphere-exchange I			
HSA1.1	Gallieni 3	14.00	ST16	M6	14.00		
Hydrology and landforms and fluvial systems - Posters			PS	Planetary interiors I			
HSA2	AGORA2-HS	17.00		PS1	M4	14.00	
Open session on hydrology and climate				Planetary interiors - Posters			
HSA3	Gallieni 2	14.00		PS1	AGORA3-PS	17.00	
Open session on hydrology and climate - Posters				Atmospheres of terrestrial planets, outer planets and moons - Posters			
HSA3	AGORA2-HS	17.00		PS3	AGORA3-PS	17.00	
Open session on hydrology and weather - Posters				Planetary magnetospheres and ionospheres I			
HSA4	AGORA2-HS	17.00		PS4	M1	14.00	
Open session on hydrology and living communities				Laboratory studies and observations on dust, ices and organics in the solar system I			
HSA7	Gallieni 2	15.30		PS7	M9	14.00	
Influence of landuse and moisture feedback on continental rainfall				Laboratory studies and observations on dust, ices and organics in the solar system - Posters			
HSB1.4	Mykonos	14.00		PS7	AGORA3-PS	17.00	
The French National Programme in Hydrology				Planet formation and extra-solar planets - Posters			
HSC1.1	Hermes	14.00	PS12	AGORA3-PS	17.00		
The French National Programme in Hydrology - Posters			Mars Pathfinder Mission: Update II				
HSC1.1	AGORA2-HS	17.30	PS13	Iris	14.00		
OA	The thermohaline circulation			NP	Quantifying predictability - Posters		
	OA1	Calliope	14.00		NP2.1	AGORA3-NP	17.00
	The thermohaline circulation - Posters				Execution and analysis of geophysical laboratory experiments - Posters		
	OA1	LES MUSES	17.00		NP2.2	AGORA3-NP	17.00
	Surface fluxes in non-homogeneous terrain				Nonlinear time series analysis		
	OA10.1	Thalie	14.00		NP2.3	M2	14.00
			Nonlinear time series analysis - Posters				
			NP2.3			AGORA3-NP	17.30



# WEDNESDAY, 22 APRIL - AFTERNOON SESSIONS CONT.

NP	Turbulence and mixing in geophysical flows, effects of stratification and rotation, convection, effect of coherent structures, Lagrangian chaos			
	NP3.2	M3	14.00	p. 258
NH	Sea surges and storms - Posters			
	NH1.1	RHODES-NH	17.00	p. 267
NH	Tsunamis - Posters			
	NH1.3	RHODES-NH	17.00	p. 268
NP	Prediction of hazardous events of meteorological origin - Posters			
	NP3.2	AGORA3-NP	17.00	p. 259
NH	Flood hazards and flood risk: regional analysis of extremes - Posters			
	NH2.3	RHODES-NH	17.00	p. 269
NH	Modelling and flood mapping in rural and urban areas			
	NH2.4	Studio	14.00	p. 270
NH	Modelling and flood mapping in rural and urban areas - Posters			
	NH2.4	RHODES-NH	17.30	p. 270
NH	Shallow landslides and rainfall triggering - Posters			
	NH2.5	RHODES-NH	17.30	p. 270
NH	Seismic hazard evaluation in high seismicity areas by observing precursory phenomena			
	NH3.2	R6	14.00	p. 272

# THURSDAY, 23 APRIL - MORNING SESSIONS

EGS	Seismicity and seismotectonics of the Mediterranean region			
	EGS1.3	Athena	08.30	p. 64
SE	Seismology and physics of the Earth's core and mantle			
	SE3	R2	08.30	p. 69
SE	From the Arctic to the Mediterranean: salt, shale and igneous diapirs in and around Europe			
	SE12	R3	11.00	p. 76
SE	3-D crustal imaging of France			
	SE16	R10	08.30	p. 79
SE	Aspects of the Carpathian-East Alpine-Pannonian geodynamics: the PANCARDI approach			
	SE20	R1	09.00	p. 84
SE	Seismic anisotropy, scattering and attenuation			
	SE23	Hermes	08.30	p. 87
SE	High-resolution seismics: theory, methods and applications			
	SE25	R3	08.45	p. 90
SE	Palaeomagnetism and tectonic evolution of the Mediterranean area			
	SE34.6	R4	08.30	p. 101
SE	Imaging, analysing and modelling pore structure in geomaterials			
	SE39.2	R11	09.00	p. 108
SE	Can electromagnetic images constrain geophysical interpretation of tectonically active environments?			
	SE44	R9	08.30	p. 114
G	Ocean modelling from altimetry and remote sensing I			
	G5	R7	08.45	p. 124
G	High resolution monitoring of land and ice surface with altimetry and SAR interferometry			
	G6	R5	09.00	p. 126
HS	Coastal aquifer dynamics and groundwater recharge			
	HSA1.4	Gallieni 3	09.00	p. 142
HS	New developments in in-situ treatment of subsurface contaminations			
	HSA8.2	Gallieni 2	11.00	p. 150
HS	Water scarcity			
	HSB2.1	Gallieni 5	11.00	p. 155
HS	Groundwater systems and management			
	HSB2.3	Gallieni 2	09.00	p. 156
HS	Dryland degradation in the Mediterranean: threat, processes and mitigation			
	HSC1.2	Mykonos	09.00	p. 158
OA	Processes in regions of oceanic time series stations			
	OA2	Calliope	08.30	p. 163
OA	Circulation variability at mesoscale I			
	OA4	Uranie	08.30	p. 165
OA	Long term measurements of surface fluxes			
	OA10.2	Thalie	09.00	p. 176
OA	Cyclogenesis and fronts: FASTEX II			
	OA13	Clio	08.30	p. 180
OA	Modelling of cloud systems			
	OA15.2	Thalie	11.00	p. 185
OA	Climate variability: time scale interactions II			
	OA17.3	Euterpe	08.45	p. 191
OA	Marine data management: assimilation, hindcasting and nowcasting			
	OA24	Erato	08.30	p. 201
OA	Marine tropospheric chemistry			
	OA27	Gallieni 5	08.30	p. 204
ST	Theory and simulations of solar system plasmas I			
	ST12	M8	09.00	p. 222
ST	Multi-wavelength observations of solar atmospheric structure, evolution and eruptions II			
	ST13.2	M5	09.00	p. 225
ST	Modelling and validation with satellite data II			
	ST15.1	M7	08.30	p. 226
ST	Polar ozone			
	ST15.2	M7	11.30	p. 227
ST	Stratosphere-troposphere-exchange II			
	ST16	M6	08.30	p. 231
PS	Planetary Interiors II			
	PS1	M4	09.00	p. 236
PS	Planetary magnetospheres and ionospheres II			
	PS4	M1	09.00	p. 240
PS	Laboratory studies and observations on dust, ices and organics in the solar system II			
	PS7	M9	08.45	p. 244
NP	Quantifying predictability			
	NP2.1	M2	08.30	p. 255
NP	Biological processes and mixing in the ocean			
	NP3.4	M3	08.30	p. 260

# THURSDAY, 23 APRIL - MORNING SESSIONS CONT.

NP	Nonlinear waves, instabilities and waveflow interactions				NH	Landslide hazards in seismically active regions			
	NP4.1	Iris	08.30	p.263		NH3.5	R6	11.00	p. 275
NH	Macroseismics: present state of intensity assessment procedures and future perspectives				NH5	Geomorphological hazards: extent, evaluation and mapping techniques			
	NH3.3	R6	09.00	p. 274		Studio		09.00	p. 278
STA	STAAARTE Workshop				STAARTE	R8		09.00	p. 280

# THURSDAY, 23 APRIL - AFTERNOON SESSIONS

EGS	Seismicity and seismotectonics of the Mediterranean region - Posters				SE	New challenges in environmental research: magneto-monitoring of anthropic influence to ecosystems			
	EGS1.3	RHODES-SE	17.00	p. 65		SE34.5	R4	14.00	p. 101
SE	Space techniques for acquisition of aeronommic-ionospheric data in the lower thermosphere				SE34.6	New challenges in environmental research: magneto-monitoring of anthropic influence to ecosystems - Posters			
	EGS4	R2	14.00	p. 67		SE34.5	RHODES-SE	17.30	p. 101
SE	Dynamics, mineral physics and tomographic imaging of the Earth's mantle - Posters				SE37	Palaeomagnetism and tectonic evolution of the Mediterranean area - Posters			
	SE2	RHODES-SE	17.00	p. 68		SE34.6	RHODES-SE	17.00	p. 102
SE	Sedimentary basin modelling and integration of geophysical and sedimentary geology data - Posters				SE38	Regional magnetic surveys: data, models and charts - Posters			
	SE8	RHODES-SE	17.00	p. 72		SE37	RHODES-SE	17.00	p. 106
SE	From the Arctic to the Mediterranean: salt, shale and igneous diapirs in and around Europe				SE39.2	Long term global geophysical data products from remote sensing			
	SE12	R3	14.00	p. 76		SE38	R1	14.00	p. 107
SE	From the Arctic to the Mediterranean: salt, shale and igneous diapirs in and around Europe - Posters				SE39.2	Imaging, analysing and modelling pore structure in geomaterials			
	SE12	RHODES-SE	17.30	p. 76		SE39.2	RHODES-SE	17.00	p. 109
SE	Intraplate earthquakes, stresses and large scale tectonic structure - Posters				SE39.3	The effect of rock micro-structure and fluids on rock physical properties - Posters			
	SE13	RHODES-SE	17.00	p. 76		SE39.3	RHODES-SE	17.00	p. 109
SE	3-D crustal imaging of France				SE43	Advances in the physical interpretation of electromagnetic soundings - Posters			
	SE16	R10	14.00	p. 79		SE43	RHODES-SE	17.00	p. 113
SE	3-D crustal imaging of France - Posters				SE44	Can electromagnetic images constrain geophysical interpretation of tectonically active environments? - Posters			
	SE16	RHODES-SE	17.00	p. 80		SE44	RHODES-SE	17.00	p. 114
SE	Geodynamics of collision belts: stacking and exhumation processes - Posters				SE48	Gas hydrates in nature: results from geophysical and geochemical studies - Posters			
	SE17.1	RHODES-SE	17.00	p. 80		SE48	RHODES-SE	17.00	p. 117
SE	Aspects of the Carpathian-East Alpine-Pannonian geodynamics: the PANCARDI approach - Posters				SE51	Structures and processes in sedimentary fans - Posters			
	SE20	RHODES-SE	17.00	p. 85		SE51	RHODES-SE	17.00	p. 120
SE	Open session on seismology - Posters				G	Precise satellite orbits for geophysical applications - Posters			
	SE21	RHODES-SE	17.00	p. 86		G4	AGORA2-G	17.00	p. 123
SE	Seismic anisotropy, scattering and attenuation				G5	Ocean modelling from altimetry and remote sensing I			
	SE23	Hermes	14.00	p. 88		G5	R7	14.00	p. 125
SE	Seismic anisotropy, scattering and attenuation - Posters				G5	Ocean modelling from altimetry and remote sensing - Posters			
	SE23	RHODES-SE	17.00	p. 88		G5	AGORA2-G	17.00	p. 125
SE	High-resolution seismics: theory, methods and applications - Posters				G6	High resolution monitoring of land and ice surface with altimetry and SAR interferometry - Posters			
	SE25	RHODES-SE	17.00	p. 90		G6	AGORA2-G	17.00	p. 127
SE	Mechanics of tectonic and volcanic earthquakes				G9	Atmospheric sounding with GPS - Posters			
	SE27	R9	14.00	p. 91		G9	AGORA2-G	17.00	p. 130
SE	Mechanics of tectonic and volcanic earthquakes - Posters								
	SE27	RHODES-SE	17.30	p. 91					
SE	Pre-eruptive processes								
	SE33	Athena	14.00	p. 94					
SE	Pre-eruptive processes - Posters								
	SE33	RHODES-SE	17.30	p. 94					
SE	Past and present geomagnetic field - Posters								
	SE34.2	RHODES-SE	17.00	p. 97					

# THURSDAY, 23 APRIL - AFTERNOON SESSIONS CONT.

G	Satellite and airborne gravimetric and altimetric techniques - Posters			
	G10	AGORA2-G	17.00	p. 130
	Effects of the atmosphere, ocean and core on nutation, polar motion and length of day - Posters			
	G12	AGORA2-G	17.00	p. 131
HS	Models, measurements and analysis of Earth rotation			
	G12.4	R5	14.00	p. 133
	Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation - Posters			
	HSA8	AGORA2-HS	17.00	p. 149
	Natural attenuation and intrinsic bioremediation: field studies I			
	HSA8.1	Gallieni 2	14.00	p. 149
	Process representation in hydrological models - can it be achieved? I			
	HSA9.1	Gallieni 3	14.00	p. 152
	Hydrology and applied mathematics - Posters			
	HSA9.1	AGORA2-HS	17.00	p. 152
	Water resources research - Posters			
	HSB1	AGORA2-HS	17.00	p. 153
	Water resources engineering and management - Posters			
	HSB2	AGORA2-HS	17.00	p. 156
	Sustainable development of watersheds and river processes			
	HSB2.2	Gallieni 5	14.00	p. 156
	Dryland degradation in the Mediterranean: threat, processes and mitigation - Posters			
	HSC1.2	AGORA2-HS	17.00	p. 159
	Fire: impact on hydrology, sediment yield and ecosystems of Mediterranean lands			
	HSC1.3	Mykonos	14.00	p. 159
	Sources and transfer of water and sediment in Mediterranean river basins - Posters			
	HSC1.4	AGORA2-HS	17.00	p. 160
OA	Processes in regions of oceanic time series stations - Posters			
	OA2	LES MUSES	17.00	p. 163
	The North Atlantic Oscillation: decadal variability in ocean and atmosphere I			
	OA3	Calliope	14.00	p. 164
	The North Atlantic Oscillation: decadal variability in ocean and atmosphere - Posters			
	OA3	LES MUSES	17.00	p. 164
	Circulation variability at mesoscale I			
	OA4	Uranie	14.00	p. 166
	Circulation variability at mesoscale - Posters			
	OA4	LES MUSES	17.30	p. 166
	Antarctic ocean circulation: observations and models - Posters			
	OA7	LES MUSES	17.00	p. 171
	Basic turbulence studies - Posters			
	OA9	LES MUSES	17.00	p. 173
	Fluxes over terrestrial surfaces - Posters			
	OA10	LES MUSES	17.00	p. 175
	Long term measurements of surface fluxes			
	OA10.2	Erato	14.00	p. 176
	Cyclogenesis and fronts: FASTEX - Posters			
	OA13	LES MUSES	17.00	p. 180
	Intercomparison and validation of the ocean-atmosphere flux fields - Posters			
	OA14.1	LES MUSES	17.00	p. 182
OA	Sensitivity of radiative perturbations in global coupled models - Posters			
	OA14.3	LES MUSES	17.30	p. 183
	Clouds and their impact on radiation and photochemical processes - Posters			
	OA15	LES MUSES	17.00	p. 184
	Radiative transfer and budget			
	OA15.3	Thalie	14.00	p. 185
	Natural climate variability on the basis of past observations I			
	OA17.2	Euterpe	14.00	p. 189
	Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere I			
	OA18	Clio	14.00	p. 193
	Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere - Posters			
	OA18	LES MUSES	17.00	p. 194
	Biogeochemical processes in submarine hydrothermal systems along the Hellenic Volcanic Island Arc - Posters			
	OA22	LES MUSES	17.00	p. 199
	Marine data management: assimilation, hindcasting and nowcasting - Posters			
	OA24	LES MUSES	17.00	p. 202
	Will the probabilistic approach be the future for numerical weather predictions?			
	OA26	M2	14.00	p. 203
	Will the probabilistic approach be the future for numerical weather predictions? - Posters			
	OA26	LES MUSES	17.30	p. 204
	Marine tropospheric chemistry - Posters			
	OA27	LES MUSES	17.00	p. 205
ST	Open session on the ionosphere and thermosphere - Posters			
	ST3	AGORA3-ST	17.00	p. 209
	Open session on the magnetosphere I			
	ST4	M5	14.00	p. 211
	Open session on the magnetosphere - Posters			
	ST4	AGORA3-ST	17.30	p. 211
	Ionospheric modelling and predictions I			
	ST10	M6	14.00	p. 219
	Ionospheric modelling and predictions - Posters			
	ST10	AGORA3-ST	17.00	p. 219
	Theory and simulations of solar system plasmas I			
	ST12	M8	14.00	p. 222
	Theory and simulations of solar system plasmas - Posters			
	ST12	AGORA3-ST	17.00	p. 222
	Modelling and validation with satellite data - Posters			
	ST15.1	AGORA3-ST	17.00	p. 227
	Polar ozone			
	ST15.2	M7	14.00	p. 227
	Polar ozone - Posters			
	ST15.2	AGORA3-ST	17.00	p. 228
	Changes in UV-B radiation - Posters			
	ST15.3	AGORA3-ST	17.00	p. 228
	Tropospheric ozone with emphasis on the Mediterranean region - Posters			
	ST15.4	AGORA3-ST	17.00	p. 229
	Stratosphere-troposphere-exchange II			
	ST16	M3	14.00	p. 232
PS	Planetary magnetospheres and ionospheres II			
	PS4	M1	14.00	p. 240

# THURSDAY, 23 APRIL - AFTERNOON SESSIONS CONT.

PS	Planetary magnetospheres and ionospheres - Posters			NP	Fluctuations, self-organization and natural hazards - Posters					
	PS4	AGORA3-PS	17.00		p. 241	NP4.2	AGORA3-NP	17.30	p. 264	
	Small bodies of the solar system I				Vortex dynamics - Posters					
	PS5	M4	14.00		p. 241	NP5	AGORA3-NP	17.00	p. 266	
	Small bodies of the solar system - Posters				NH	Shallow landslides and rainfall triggering				
	PS5	AGORA3-PS	17.00			p. 241	NH2.5	Studio	14.00	p. 270
	Lunar exploration I					Seismic hazard evaluation in high seismicity areas by observing precursory phenomena - Posters				
PS9	M9	14.00	p. 245	NH3.2		RHODES-NH	17.00	p. 273		
Lunar exploration - Posters			Macroseismics: present state of intensity- assessment procedures and future perspectives - Posters							
PS9	AGORA3-PS	17.00	p. 245	NH3.3	RHODES-NH	17.00	p. 274			
NP	Biological processes and mixing in the ocean - Posters			Landslide hazards in seismically active regions						
	NP3.4	AGORA3-NP	17.00	p. 260	NH3.5	R6	14.00	p. 275		
	Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere			Landslide hazards in seismically active regions - Posters						
	NP3.5	M3	14.00	p. 261	NH3.5	RHODES-NH	17.30	p. 276		
	Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere - Posters			Seismic microzonation in urban areas - Posters						
	NP3.5	AGORA3-NP	17.00	p. 261	NH3.7	RHODES-NH	17.00	p. 276		
	Nonlinear waves, instabilities and waveflow interactions			Volcanic hazards: field studies, instrumentation and observation networks - Posters						
	NP4.1	Iris	14.00	p. 263	NH4	RHODES-NH	17.00	p. 277		
	Nonlinear waves, instabilities and waveflow interactions - Posters			Geomorphological hazards: extent, evaluation and mapping techniques - Posters						
	NP4.1	AGORA3-NP	17.30	p. 264	NH5	RHODES-NH	17.00	p. 279		
				STA	STAAARTE Workshop					
					STAARTE	R8	14.10	p. 280		

# FRIDAY, 24 APRIL - MORNING SESSIONS

SE	Dynamics, mineral physics and tomographic imaging of the Earth's mantle			G	Effects of the ocean				
	SE2	R10	11.00		p. 68	G12.2	R5	11.00	p. 132
	Sedimentary basin modelling and integration of geophysical and sedimentary geology data			HS	Effects of the core				
	SE8	Hermes	08.30		p. 73	G12.3	R5	08.30	p. 133
	Geodynamics of collision belts: stacking and exhumation processes			OA	Natural attenuation and intrinsic bioremediation: field studies II				
	SE17.1	R3	09.00		p. 80	HSA8.1	Gallieni 2	08.30	p. 150
	Continental roots: their petrology, geochemistry and geophysical features II				Redox processes in aquifers				
	SE29	R10	08.45		p. 92	HSA8.3	Gallieni 2	11.00	p. 151
	Pre-eruptive processes				Process representation in hydrological models - can it be achieved? II				
	SE33	Athena	08.30		p. 95	HSA9.1	Gallieni 3	08.30	p. 152
	Past and present geomagnetic field				Remote sensing and GIS in hydrology				
	SE34.2	R4	08.45		p. 98	HSB1.3	Gallieni 5	08.30	p. 154
Regional magnetic surveys: data, models and charts			Sources and transfer of water and sediment in Mediterranean river basins						
SE37	R2	08.30	p. 106		HSC1.4	Mykonos	09.00	p. 160	
The effect of rock micro-structure and fluids on rock physical properties			G	The North Atlantic Oscillation: decadal variability in ocean and atmosphere II					
SE39.3	R11	09.00		p. 109	OA3	Calliope	08.30	p. 165	
Gas hydrates in nature: results from geophysical and geochemical studies				Circulation variability at mesoscale II					
SE48	R1	08.30	p. 118	OA4	Uranie	08.30	p. 167		
			Antarctic ocean circulation: observations and models						
			OA7	Uranie	11.00	p. 171			
			Basic turbulence studies						
			OA9	Erato	08.30	p. 174			
			Remote sensing of clouds and aerosols						
			OA15.1	Thalie	10.00	p. 184			
			Photo-chemical processes in clouds						
			OA15.4	Thalie	08.30	p. 186			

## FRIDAY, 24 APRIL - MORNING SESSIONS CONT.

OA	Natural climate variability on the basis of past observations II			PS	Lunar exploration II		
	OA17.2	Euterpe	09.00 p. 190	PS9	M9	08.30 p. 245	
OA	Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere II			NP	Scaling, multifractals and natural/man-made hazards		
	OA18	Clio	08.30 p. 195		NP1.4	M2 08.45 p. 255	
ST	Open session on the ionosphere and thermosphere			Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere II			
	ST3	M6	10.45 p. 210	NP3.5 M3 08.30 p. 262			
ST	Open session on the magnetosphere II			Fluctuations, self-organization and natural hazards			
	ST4	M5	09.00 p. 212	NP4.2 M1 08.45 p. 264			
ST	Ionospheric modelling and predictions II			Vortex dynamics			
	ST10	M6	08.30 p. 220	NP5 Iris 08.30 p. 266			
ST	Theory and simulations of solar system plasmas II			NH	Seismic microzonation in urban areas		
	ST12	M8	09.00 p. 223		NH3.7	R6 08.30 p. 277	
ST	Tropospheric ozone with emphasis on the Mediterranean region			Volcanic hazards: field studies, instrumentation and observation networks			
	ST15.4	M7	08.45 p. 229	NH4 Studio 09.00 p. 278			
PS	Stratosphere-troposphere-exchange III						
	ST16	M3	08.30 p. 232				
PS	Small bodies of the solar system II						
	PS5	M4	09.00 p. 242				

## FRIDAY, 24 APRIL - AFTERNOON SESSIONS

SE	Dynamics, mineral physics and tomographic imaging of the Earth's mantle			OA	Remote sensing of clouds and aerosols		
	SE2	R10	14.00 p. 69		OA15.1	Thalie 14.00 p. 184	
SE	Sedimentary basin modelling and integration of geophysical and sedimentary geology data			Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere II			
	SE8	Hermes	14.00 p. 74	OA18 Clio 14.00 p. 195			
SE	Pre-eruptive processes II			Biogeochemical processes in submarine hydrothermal systems along the Hellenic Volcanic Island Arc			
	SE33	Athena	14.00 p. 95	OA22 Euterpe 14.00 p. 200			
SE	Past and present geomagnetic field			ST	Open session on the ionosphere and thermosphere		
	SE34.2	R4	14.00 p. 98		ST3	M6 14.00 p. 211	
SE	The effect of rock micro-structure and fluids on rock physical properties			Open session on the magnetosphere II			
	SE39.3	R11	14.00 p. 110	ST4 M5 14.00 p. 212			
SE	Structures and processes in sedimentary fans			Theory and simulations of solar system plasmas II			
	SE51	R1	14.00 p. 120	ST12 M8 14.00 p. 223			
G	Satellite and airborne gravimetric and altimetric techniques			Solar imprints in terrestrial archives			
	G10	R7	14.00 p. 130	ST14 M4 14.00 p. 225			
G	Effects of the atmosphere			Ozone as a climate gas			
	G12.1	R5	14.00 p. 132	ST15.5 M7 14.00 p. 230			
HS	Redox processes in aquifers			PS	Lunar exploration II		
	HSA8.3	Gallieni 2	14.00 p. 151		PS9	M9 14.00 p. 246	
HS	Influence of environmental and anthropogenic change on flood processes			NP	Scaling, multifractals and natural/man-made hazards		
	HSB1.2	Gallieni 5	14.00 p. 154		NP1.4	M2 14.00 p. 255	
OA	The North Atlantic Oscillation: decadal variability in ocean and atmosphere II			Vortex dynamics			
	OA3	Calliope	14.00 p. 165	NP5 Iris 14.00 p. 266			
OA	Antarctic ocean circulation: observations and models			NH	Volcanic hazards: field studies, instrumentation and observation networks		
	OA7	Uranie	14.00 p. 171		NH4	Studio 14.00 p. 278	
OA	Basic turbulence studies						
	OA9	Erato	14.00 p. 174				

# Society Symposia

## EGS1 Tribute to Stephan Mueller 2 Evolution of the African-Eurasian plate boundary

EGS

### EGS1 Tribute to Stephan Mueller 1 Tectonics, structure and dynamics of the Alpine-Mediterranean Sys- tem

Convener: Ansorge, J.  
Co-Convener(s): Banda, E.; Kahle, H.-G.  
**Tuesday, 21 April 1998**  
Lecture Room: ATHENA  
Chairperson: Kahle, H.-G.

- 09:00 NOLET, G.  
Imaging the upper mantle under the Mediterranean-Alpine region: pushing the limits of seismic interpretation (Solicited Paper)
- 09:30 CHANNELL, J.E.T.; MUTTONI, G.  
Paleomagnetism and paleogeography in the Mediterranean (Solicited Paper)
- 10:00 UDIAS, A.  
Seismicity and stress regime in the Mediterranean region (Solicited Paper)
- 10:30 BREAK

Chairperson: Banda, E.

- 11:00 HIRN, A.  
An approach to seismotectonics of the eastern Mediterranean with marine seismic studies (Solicited Paper)
- 11:30 KAHLE, H.-G.  
Present-day plate movements and strain accumulation in the eastern Mediterranean (Solicited Paper)
- 12:00 SERRI, G.  
Neogene-Quaternary magmatic activity and its geodynamic implications in the central Mediterranean region (Solicited Paper)
- 12:30 FERNANDEZ, M.  
Geothermal regime of the alpine Mediterranean region (Solicited Paper)
- 13:00 LUNCH

Chairperson: Ansorge, J.

- 14:00 CLOETINGH, S.; HORVATH, F.  
Tectonic modelling of sedimentary basin formation in the Alpine-Mediterranean: developments and perspectives (Solicited Paper)
- 14:30 PRODEHL, C.  
Cenozoic rift structures in the surroundings of the Alpine-Mediterranean system (Solicited Paper)
- 15:00 KISSLING, E.  
Deep structure and tectonics of the alpine collision zone (Solicited Paper)
- 15:30 WORTEL, M.J.R.; SPAKMAN, W.  
The evolution of the Alpine-Mediterranean region: from structure and kinematics to dynamics (Solicited Paper)
- 16:00 FROIDEVAUX, C.  
Geodynamical modelling: global mantle dynamics and seismic tomography (Solicited Paper)
- 16:30 END OF SUB-SESSION

Convener: Channell, J.E.T.  
Co-Convener(s): Jacoby, W.R.; Zerbini, S.  
**Wednesday, 22 April 1998**  
Lecture Room: ATHENA  
Chairpersons: Channell, J.E.; Horvath, F.

- 09:00 STAMPFLI, G.M.; MOSAR, J.  
Plate tectonics of the western Tethyan regions (Solicited Paper)
- 09:30 SPAKMAN, W.; BIJWAARD, H.  
Lithosphere and mantle structure below the African and European plates
- 09:45 HORVATH, F.; CLOETINGH, S.  
Backarc basin evolution at the African-European plate boundary: progress and problems
- 10:00 BERTOTTI, G.; NEGREDO, A.; SABADINI, R.  
Lithospheric processes in the Provencal and Tyrrhenian oceans control the velocity of subduction in Calabria (southern Italy)
- 10:15 ALVAREZ-MARRON, J.; COMAS, M.C.; CARBONELL, R.  
Structure of the Alboran Basin, tectonics at the Iberia-Africa plate boundary from neogene times
- 10:30 LUCENTE, F.P.; SPERANZA, F.  
Belt bending as a consequence of lateral bending of subducting lithospheric slab: geophysical evidences from the northern Apennines (Italy)
- 10:45 VANDER MEULEN, M.J.; MEULENKAMP, J.E.; WORTEL, M.J.R.; KOUWENHOVEN, T.J.; VANDEN BERG VAN SAPAROE, A.P.H.; VANDER ZWAAN, G.J.  
The surface effects of SLAB detachment: geological constraints from Apenninic foredeeps
- 11:00 ARGNANI, A.  
Cenozoic Africa-Europe convergence in the central Mediterranean: kinematics and geological implications
- 11:15 REGENAUER-LIEB, K.  
Lithosphere dynamics and void - volatile interaction in the European Alpine collision (Solicited Paper)
- 11:45 LUNCH
- 12:00 Business Meetings

Chairpersons: Jacoby, W.R.; Zerbini, S.

- 14:00 COSCA, M.  
When was the EO-alpine phase of orogenesis? (Solicited Paper)
- 14:30 CHEILLETZ, A.; RUFFET, G.; MARIGNAC, C.; KOLLI, O.; GASQUET, D.; FERAUD, G.; BOUILLIN, J.P.  
<sup>40</sup>Ar/<sup>39</sup>Ar evidence of an Eo-Alpine event (128 Ma) in greater Kabylia (Algeria): geodynamic consequences
- 14:45 FACCENNA, C.; SPERANZA, F.; FUNICIELLO, R.  
Does subduction initiate at passive margins? Experiments and geological records in the Mediterranean
- 15:00 SPERNER, B.; ZWIEGEL, P.; MOSER, F.; GIRBACEA, R.; LORENZ, F.P.  
Plate-tectonics of the Carpathian Arc

- 15:15 **LORENZ, F.P.**; MARTIN, M.; SPERNER, B.; WENZEL, F.; POPA, M.  
Teleseismic imaging of the Vrancea zone, Romania
- 15:30 **MANTOVANI, E.**; **ALBARELLO, D.**; **TAMBURELLI, C.**; **BABBUCCI, D.**; **VITI, M.**  
Mediterranean evolution: a simple interpretation based on the minimum work condition (Solicited Paper)
- 16:00 **MARTON, E.**; **DROBNE, K.**; **COSOVIC, V.**  
Tertiary counterclockwise rotation of Adria as evidenced by new paleomagnetic data from Istria and NW Dinarids
- 16:15 **KOZUR, H.W.**  
The position of the African-Eurasian plate boundary during the Permian to Jurassic (Solicited Paper)
- 16:45 **END OF SUB-SESSION**

### **EGS1 Tribute to Stephan Mueller .2 Evolution of the African-Eurasian plate boundary - Poster Session**

Convener: Channell, J.E.T.

Co-Convener(s): Jacoby, W.R.; Zerbini, S.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Wednesday, 17:00 - 19:00**

Poster Area: RHODES - SE

- SE001 **ALFONSI, L.**; **DI BELLA, L.**; **FLORINDO, F.**; **FREPOLI, A.**; **MARIUCCI, M.T.**; **MARRA, F.**; **MONTONE, P.**; **SAGNOTTI, L.**; **WINKLER, A.**  
Pliocene to present stress-field evolution of the central Apennines Adriatic margin (Italy): an integrated geophysical approach
- SE002 **CIANETTI, S.**; **GIUNCHI, C.**; **GASPERINI, P.**; **BOCCALETTI, M.**  
The active tectonics of the Aegean region: insights from numerical models
- SE003 **MEIJER, P.T.H.**; **WORTEL, M.J.R.**  
Model analysis of the evolution of intra-plate stress in the central Mediterranean
- SE004 **MANTOVANI, E.**; **VITI, M.**; **ALBARELLO, D.**; **TAMBURELLI, C.**; **BABBUCCI, D.**  
Numerical simulation of the recent/present kinematic pattern in the central-eastern Mediterranean area
- SE004A **CARMINATI, E.**; **WORTEL, M.J.R.**; **MEIJER, P.T.H.**; **SPAKMAN, W.**; **VAN DER MEULEN, M.J.**; **SABADINI, R.**  
The role of the Africa-Eurasia plate boundary in the two stage opening of the western and central Mediterranean basins \*
- SE005 **ANDEWEG, B.**; **DE VICENTE, G.**; **CLOETINGH, S.**; **MUNOZ MARTIN, A.**  
Modelling of tertiary to present day stress fields in the Iberian Peninsula and related intraplate deformation
- SE006 **BUITER, S.J.H.**; **GOVERS, R.**; **WORTEL, M.J.R.**  
Numerical simulations of the surface effects of slab detachment: the Apennines
- SE007 **NEGREDO, A.M.**; **SABADINI, R.**; **BIANCO, G.**; **FERNANDEZ, M.**  
Dynamic modelling of crustal motions and sea-level changes related to subduction and convergence in the central Mediterranean

- SE008 **BEN-AVRAHAM, Z.**; **WDOWINSKI, S.**; **ARVIDSON, R.**; **EKSTRÖM, G.**  
Segmentation and seismicity of the Cyprian Arc
- SE009 **LIVSHITS, YU.YA.**  
The tectonic position and structure of Sinai subplate, eastern Mediterranean
- SE010 **KHAIN, V.E.**  
Wilson's and Bertrand's cycles in the evolution of the Mediterranean and Ural-Okhotsk intercontinental mobile belt
- SE011 **BARIS, S.**; **PINAR, A.**; **KOMUT, T.**; **ISIKARA, A.M.**  
Source process and seismotectonic implications of the 13.10.1997 (Ms=6.6) and 18.11.1997 (Ms=6.4) southern Greece earthquakes \*

### **EGS1 Tribute to Stephan Mueller .3 Seismicity and seismotectonics of the Mediterranean region**

Convener: Garcia-Fernandez, M.

Co-Convener(s): Mayer-Rosa, D.; Panza, G.F.

**Thursday, 23 April 1998**

Lecture Room: ATHENA

Chairperson: Stucchi, M.

- 08:30 **SUHADOLC, P.**  
Seismicity, active tectonic and GIS: understanding seismic hazard (Solicited Paper)
- 09:00 **GIARDINI, D.**; **GRUENTHAL, G.**; **AND THE WORKING GROUPS OF PROJECTS CAUCAS, IBERO-MAGHREB, SESAME, ADRIA, RELEMR, BEECD.QSEZ-CIPAR**  
Regional seismic hazard assessment in the European-Mediterranean: a GSHAP review
- 09:15 **BAER, M.**  
Monitoring the regional and global seismicity by national/regional data centres
- 09:30 **VACCARI, F.**; **AOUDIA, A.**; **BUS, Z.**; **MARKUSIC, S.**; **OROZOVA, I.**; **RADULAIAN, M.**; **SIVCIC, M.**; **PANZA, G.F.**  
Quantitative seismic zoning in the Mediterranean area
- 09:45 **SAMARDJIEVA, E.**; **BADAL, J.**; **PAYO, G.**  
A new catalogue of digitized historical seismograms for Iberian earthquakes
- 10:00 **SOURIAU, A.**; **PAUCHET, H.**; **SYLVANDER, M.**  
A new, accurate map of the Pyrenean seismicity and its tectonic implications
- 10:15 **PAUCHET, H.**; **RIGO, A.**; **RIVERA, L.**; **SOURIAU, A.**  
A detailed analysis of the February 1996 aftershock sequence in eastern Pyrenees, France
- 10:30 **BREAK**
- Chairperson: Erdik, M.
- 11:00 **EVA, E.**; **SOLARINO, S.**; **SPALLAROSSA, D.**; **EVA, C.**  
Seismicity and seismotectonic of the western Ligurian Sea: a review
- 11:15 **MARRA, E.**  
Low-magnitude earthquakes of Rome: structural interpretation and possible seismotectonic implications

- 11:30 ALBINI, P.; REBEZ, A.; STUCCHI, M.  
Long-term seismicity patterns around Adriatic region
- 11:45 HOFSTETTER, R.  
Seismicity and seismotectonics of the eastern Mediterranean (Solicited Paper) \*
- 12:15 PAPOULIA, J.  
Reliability of seismic hazard assessment in terms of observed macroseismic intensities in Greece
- 12:30 KULOSHVILI, S.  
The main features of active tectonics and seismotectonics of the Caucasus
- 12:45 SLEJKO, D.; PERUZZA, L.; REBEZ, A.  
Different aspects and considerations on seismic hazard in the Adriatic region
- 13:00 END OF SESSION

### EGS1 Tribute to Stephan Mueller .3 Seismicity and seismotectonics of the Mediterranean region

Convener: Garcia-Fernandez, M.

Co-Convener(s): Mayer-Rosa, D.; Panza, G.F.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Badal, J.

- SE103 PONDRELLI, S.; MORELLI, A.; EKSTRÖM, G.  
Moment tensors and seismotectonics of the Mediterranean region
- SE104 MANTOVANI, E.; ALBARELLO, D.; BABBUCCI, D.; TAMBURELLI, C.  
Recent/present tectonic processes in the Italian region and their relation with seismic and volcanic activity
- SE105 PERUZZA, L.; STUCCHI, M.; CAMASSI, R.  
Lessons from the past: seismogenesis and hazard in central Italy
- SE106 VITI, M.; ALBARELLO, D.; MANTOVANI, E.  
Seismic strain rate estimates in the central-eastern Mediterranean region: a reliability analysis
- SE107 MICHELINI, A.; ZIVCIC, M.; SUHADOLC, P.  
Simultaneous inversion for velocity structure and hypocenters in Slovenia
- SE108 ERDIK, M.; BIRGÖREN, G.; APAYDYN, N.; ALPAY, Y.  
Assessment of the seismic hazard in Cyprus
- SE109 HOFSTETTER, R.; SHAPIRA, A.  
Determination of earthquake energy release in the eastern Mediterranean region

### EGS2 Geophysical and geological signatures of past and present climate change

Convener: Premoli-Silva, I.

Co-Convener(s): Herbert, T.D.; Maley, J.

Monday, 20 April 1998

Lecture Room: R1

Chairperson: N.N.

- 08:45 KOSTYANEV, S.G.; BALTAKOV, G.K.  
Reconstruction of the paleoclimate of north Bulgaria during the Pleistocene and Holocene

- 09:00 BODRI, L.; CERMAK, V.  
Last millennium climate history inferred from borehole temperature profiles: regional patterns of climatic changes in the Czech Republic
- 09:15 DELLA VEDOVA, B.; PELLIS, G.; REBESCO, M.; SCARAZZATO, P.; CORSELLI, C.; CAMERLENGHI, A.; URANIA 19/97 CRUISE PARTY  
New oceanographic data and heat flow measurements in the sediment keep track of the actual climate change in the eastern Mediterranean
- 09:30 MÖRNER, N.-A.  
Sea level changes in the near future
- 09:45 KOHL, T.  
Subsurface temperature signals in mountain area
- 10:00 PELTIER, W.R.  
Earth's rotational response to the late-Pleistocene glacial cycle and to current global change (Solicited Paper)
- 10:30 BREAK

Chairperson: Hübscher, C.

- 11:00 RASPOPOV, O.M.; SHUMILOV, O.I.; KASATKINA, E.A.; PETROVA, G.N.; DERGACHEV, V.A.; CREER, K.  
Connection between the changes of geomagnetic field intensity and climate changes in the Holocene
- 11:15 BEAUFORT, L.; LANCELOT, Y.; CAMBERLIN, P.; CAYRE, O.; VINCENT, E.; BASSINOT, F.; LABEYRIE, L.  
Primary production dynamics in the equatorial Indian Ocean: southern oscillation and/or monsoon origins
- 11:30 SCHMITT, F.; SCHERTZER, D.; LOVEJOY, S.  
Multifractal analysis of ice core climate data
- 11:45 HERBERT, T.D.; GEE, J.S.  
Can we use sedimentary records to deduce long-term changes in the Earth's orbital eccentricity?
- 12:00 KÖSSLER, P.; ERBACHER, J.; APPEL, E.  
Rock magnetic signature of Milankovitch cyclicity recorded in mid-cretaceous hemipelagic sediments of the Vocontian basin (SE France)
- 12:15 SERANNE, M.; NZE ABEIGNE, C.-R.  
Stratigraphic signature of tertiary climate change on west African margins
- 12:30 STULC, P.; SAFANDA, J.; KRESL, M.; CERMAK, V.; SIR, M.  
Monitoring climate change in the Earth's subsurface
- 12:35 CORREIA, A.; SAFANDA, J.  
Comparison of geothermal ground surface temperature history with instrumental air temperature series in mainland Portugal
- 12:40 TARASOV, P.E.; DOROFYUK, N.I.  
Holocene vegetation, lake level and climate change in Mongolia: a response to the insolation forcing
- 12:45 MÖRNER, N.-A.  
Neotectonics and global climate
- 12:50 END OF SESSION

### Surveys in Geophysics

the EGS journal for the publication of extended and refereed review articles in all disciplines concerning geo- and space sciences. *Surveys in Geophysics* is published by Kluwer Academic Publishers.



## EGS2 Geophysical and geological signatures of past and present climate change - Poster Session

Convener: Premoli-Silva, I.

Co-Convener(s): Herbert, T.D.; Maley, J.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

- SE301 **STULC, P.**; SAFANDA, J.; KRESL, M.; CERMAK, V.; SIR, M.  
Monitoring climate change in the Earth's subsurface
- SE302 **CORREIA, A.**; SAFANDA, J.  
Comparison of geothermal ground surface temperature history with instrumental air temperature series in mainland Portugal
- SE303 **TARASOV, P.E.**; DOROFYUK, N.I.  
Holocene vegetation, lake level and climate change in Mongolia: a response to the insolation forcing
- SE304 **MÖRNER, N.-A.**  
Neotectonics and global climate

## EGS3 Modelling techniques and joint inversion in Earth sciences

Convener: Götze, H.-J.

Co-Convener(s): Meurers, B.; Romanyuk, T.V.; Schmidt, S.; Strykowski, G.

**Monday, 20 April 1998**

Lecture Room: R4

Chairperson: Götze, H.-J.

Editors: Götze, H.-J.; Meurers, B.; Romanyuk, T.V.; Schmidt, S.; Strykowski, G.

09:00 **GÖTZE, H.-J. AND CONVENERS**

Introductory remarks

09:15 **BREUNING, M.**; CREMERS, A.B.; GÖTZE, H.-J.; SCHMIDT, S.; SEIDEMANN, R.; SHUMILOV, S.; SIEHL, A.

First steps towards an interoperable 3D GIS - an example from southern lower Saxony, Germany (Solicited Paper)

09:45 **SCHMIDT, S.**; GÖTZE, H.-J.

Integration of data constraints and potential field modelling - an example from southern Lower Saxony (Oral + Poster)

10:00 **KLESPEL, C.**; SCHMIDT, S.; GÖTZE, H.-J.

IVIS-3D goes WWW: how to use offline rendering capabilities for the 3D visualization in the World Wide Web

10:15 **BREAK**

Chairperson: Strykowski, G.

Editors: Götze, H.-J.; Meurers, B.; Romanyuk, T.V.; Schmidt, S.; Strykowski, G.

10:45 **PELTIER, W.R.**

The inverse problem for mantle viscosity: new results based upon joint inversion of glacial isostatic adjustment data (Solicited Paper)

11:15 **LOEWENTHAL, D.**

Mathematical physics enigma: bending Snell's rays or straight trajectories

11:30 **MULLER, S.**; LEGRAND, J.-F.; GARDA, P.; MULLER, J.-D.; CANSI, Y.; CRUSEM, R.  
Seismic events discrimination by a neuro-fuzzy merging of incomplete data

11:45 **STRYKOWSKI, G.**

Some technical details concerning a new method of joint gravimetric-seismic inversion

12:00 **KOBRUNOV, A.I.**; MOISEYENKOVA, S.V.; KHOLODILOV, D.V.

To a technique of automated complex interpretation of geophysical data

12:15 **NIELSEN, L.**; JACOBSEN, B.J.; BALLING, N.

Joint gravimetric and wide-angle seismic inversion for crustal modelling with application to the central graben, North Sea

12:30 **LUNCH**

Chairperson: Meurers, B.

Editors: Götze, H.-J.; Meurers, B.; Romanyuk, T.V.; Schmidt, S.; Strykowski, G.

14:00 **SPAKMAN, W.**; NYSET, M.

A novel method for the inversion of relative displacement data: joint estimation of continuous crustal deformation and fault slip

14:15 **JACOBSEN, B.H.**; JENSEN, J.M.; MOLLER, I.; EFFERSO, F.

Multi-channel deconvolution in geophysics and helioseismology

14:30 **GAK, E.Z.**; GRIDIN, V.I.

The modelling techniques for studying the properties of geophysical fields in singular areas

14:45 **STEPANOVA, I.E.**

Integral equation for a 3D potential inversion problem

15:00 **STRAKHOV, V.N.**; STEPANOVA, I.E.; STRAKHOV, A.V.; GRICHUK, L.V.

The integral representation method at the solution of 3D inverse problems in gravimetry and magnetometry

15:15 **LEGOSTAEVA, O.V.**; STAROSTENKO, V.I.; YEGOROVA, T.P.

Automatized system of 3-D gravity modelling: the main principles and software

15:30 **BARRIO-ALVERS, L.**; GÖTZE, H.-J.; SCHECK, M.

Density structure of the northeast German basin: 3D modelling along the DEKORP NE-profile

15:45 **ROMANYUK, T.V.**; GÖTZE, H.-J.

A density model of Andean subduction zone

16:00 **ARANEDA, M.**; AVENDAÑO, M.S.; SCHMIDT, S.; GOETZE, H.J.

Gravimetric modellings of the southern Andes (38°-42°S)

16:15 **BERCOVSKA, V.**

Part of the new concert for oil formation in scientific informational models

16:30 **END OF SESSION**

17:00 **Opening**

19:30 **Reception**

---

**Attend the Poster Session**

---

## EGS3 Modelling techniques and joint inversion in Earth sciences - Poster Session

Convener: Götze, H.-J.

Co-Convener(s): Meurers, B.; Romanyuk, T.V.; Schmidt, S.; Strykowski, G.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Schmidt, S.

Editors: Meurers, B.; Romanyuk, T.V.; Schmidt, S.; Strykowski, G.

SE305 **SCHMIDT, S.; GÖTZE, H.-J.**

EGS3-002 Integration of data constraints and potential field modelling - an example from southern Lower Saxony

SE306 **SPAKMAN, W.; BIJWAARD, H.**

EGS3-020 Irregular cell parameterization of tomographic problems

SE307 **PISERCHIA, P.-F.; RODRIGUES, D.;**

EGS3-021 **VIRIEUX, J.; GAFFET, S.; LAMBARE, G.**

Numerical modelling of T-wave propagation

SE308 **MONTELLI, R.; NOLET, G.; VIRIEUX, J.**

EGS3-022 Calculating the resolution and the covariance matrix without using singular value decomposition

SE309 **KOBRUNOV, A.I.; MOISEYENKOVA, S.V.;**

EGS3-023 **KHOLODILOV, D.V.**  
Construction of a detailed model of geological media based on solving a multiparametrical inverse problem

SE310 **BREUNING, M.; CREMERS, A.B.; GÖTZE,**

EGS3-024 **H.-J.; SCHMIDT, S.; SEIDEMANN, R.;**  
**SHUMILOV, S.; SIEHL, A.**

Generation of geological maps by an interoperable approach - an example from southern lower Saxony, Germany

SE311 **KLESPPER, C.; SCHMIDT, S.; GÖTZE, H.-J.**

EGS3-025 Concept and examples of interactive visualization with IVIS-3D

SE312 **BIELIK, M.; HRUSECKY, I.; KOHUT, I.;**

EGS3-026 **KOSTECKY, P.**

Lithosphere structure of the sedimentary basins in the Carpatho-Pannonian region as inferred from interpretation of geophysical data

SE313 **MORDVINOVA, V.V.; KOSAREV, G.L.**

EGS3-027 Velocity structure of crust and upper mantle beneath the Baikal rift and its surroundings

## EGS4 Space techniques for acquisition of aeronomic-ionospheric data in the lower thermosphere

Convener: Laneve, G.

Co-Convener(s): Herrero, F.A.

Thursday, 23 April 1998

Lecture Room: R2

Co-sponsored by: CRPSM

Chairperson: N.N.

Editors: Herrero, F.A.; Laneve, G.

14:00 **HERRERO, F.A.**

EGS4-001 In-situ measurements of the neutral and ionic components of the lower thermosphere: a review (Solicited Paper)

14:30 **PFAFF, R.F.**

EGS4-002 Exploration of the lower ionosphere and thermosphere using in-situ measurements on low perigee satellites

14:45 **GREBOWSKY, J.M.; CURTIS, S.A.**

EGS4-003 Geospace electrodynamics mission

15:00 **CLEMMONS, J.H.; HERRERO, F.A.; PFAFF, R.F.**

EGS4-004 New instrumental techniques for in-situ measurements in the lower thermosphere/ionosphere

15:15 **HERRERO, F.A.**

EGS4-005 Measurements of the altitude distribution of the horizontal wind with "weather-vanes" on a tether satellite

15:30 **PFAFF, R.F.**

EGS4-006 Electric field measurements in the lower ionosphere (80-150 km) using sounding rocket probes

15:45 **AVAKYAN, S.V.**

EGS4-007 Some purposes and methods of the satellite measurements of the ionospheric response on the solar flares

16:00 **CARROLL, J.A.; VAN DER HEIDE, E.J.;**

EGS4-008 **KRUIJFF, M.**

Options for coordinated multi-point sensing in the lower thermosphere

16:15 **LANEVE, G.**

EGS4-009 Small satellites for studies in the lower thermosphere

16:30 **ILLES-ALMAR, E.; ALMAR, I.; BENCZE, P.;**

EGS4-010 **LANEVE, G.**

Wave-like variations and sudden density decreases in the lower thermosphere as measured by the San Marco V satellite

16:45 **KOREPANOV, V.**

EGS4-011 Electrodynamic tether system

17:00 **END OF SESSION**

EGS



## 1999 General Assembly Den Haag, 19 - 23 April

Attend the open EGS Section/IWG Meetings on Wednesday, 22 April, 12.00-14.00, and make your suggestions to the scientific programme. Further information on the EGS Web Site <http://www.copernicus.org/EGS/EGS.html>.

# Solid Earth Geophysics

## SE1 Open session on tectonophysics

Convener: Sabadini, R.  
**Monday, 20 April 1998**  
 Lecture Room: R2  
 Chairperson: N.N.

- 08:30 DUMA, G.  
 Stress variations in seismic zones are clearly reflected in long term and diurnal geomagnetic variations
- 08:45 GONCHAROV, M.A.  
 Ridges and depressions: transversal ones in spreading zones and longitudinal ones in collision zones, as a result of two-stage convection
- 09:00 GABRIEL, G.; JAHR, T.  
 The Harz Mountains, Germany: the result of wrench-fault tectonics?
- 09:15 POLIAKOV, A.N.B.; BUCH, W.R.  
 Faulting in mid-ocean ridges: formation of abyssal hills
- 09:30 HASSANZADEH, J.; ESMAEELI FARD, S.  
 Geothermal gradient variations in Iran and their geotectonic implications
- 09:45 MOAKHAR, M.O.; ELMING, S.-A.  
 Uplift deduced from a palaeomagnetic study of neoproterozoic study of dykes in central of Sweden
- 10:00 FERAUD, G.; AGUIRRE, L.; MORATA, D.; VERGARA, M.; PUGA, E.; FEDERICO, A.D.  
 Precise time constraints on the evolution of an extensional basin from the coastal range of central Chile
- 10:15 GOLITSYN, G.S.  
 Three simple derivations of Gutenberg-Richter law
- 10:30 END OF SESSION

## SE1 Open session on tectonophysics - Poster Session

Convener: Sabadini, R.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
 Poster Area: RHODES - SE

- SE133 GEMMER, L.; BOM NIELSEN, S.; LYKKE-ANDERSEN, H.  
 Trends in deformation patterns in the Danish and surrounding areas investigated by 3D finite element modelling
- SE134 PASQUALE, V.; VERDOYA, M.; CHIOZZI, P.  
 Deep seismic sources and critical temperature
- SE135 GONCHAROV, M.A.; TALITSKY, V.G.  
 Transform faults at mid-oceanic-ridges as a result of diffused heterogeneous extension of medium with transversal convection structure
- SE136 FROLOVA, N.S.; GEPTNER, T.M.; GONCHAROV, M.A.  
 Horizontal compression of a layered sequence: folding or thrusting?

## SE2 Dynamics, mineral physics and tomographic imaging of the Earth's mantle - Poster Session

Convener: Montagner, J.-P.  
 Co-Convener(s): Schmeling, H.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: RHODES - SE

- SE156 PANKOV, V.L.; BUBNOVA, N.YA.; KALACHNIKOV, A.A.  
 Equation of state of magnesio-wuestite and wuestite
- SE157 VAN HUNEN, J.; VAN DEN BERG, A.P.; VLAAR, N.J.  
 The fate of young subducting lithosphere
- SE158 CIZKOVA, H.; VAN DEN BERG, A.P.; VLAAR, N.J.  
 Could the slab-like structure found to extend into the deep lower mantle be explained by thermal coupling?
- SE159 MOCQUET, A.; CASTILLO, J.; VACHER, P.  
 Some tests on the reflexion and transmission properties of the 660 km seismic discontinuity
- SE160 MASSON, F.; LEVEQUE, J.-J.  
 From ACH teleseismic tomography to absolute velocity
- SE161 DUMOULIN, C.; DOIN, M.-P.; FLEITOUT, L.  
 Heat transfer at the base of the lithosphere for a Newtonian and Non-Newtonian, highly temperature and pressure dependent rheology
- SE162 MAMBOLE, A.; FLEITOUT, L.; LABROSSE, G.; TRIC, E.  
 Onset of convection in binary fluids with temperature-dependent viscosity
- SE163 DEVAUX, J.P.; SCHUBERT, G.; ANDERSON, C.  
 Formation of a metastable olivine wedge in a subducting slab
- SE164 INSERGUEIX-FILIPPI, D.; DUPEYRAT, L.; TRIC, E.; MENVIELLE, M.  
 Influence of plate kinematics, convection intensity, and subduction geometry on Earth's upper mantle dynamics
- SE165 COLLIER, J.; HELFFRICH, G.  
 "410" and "660" km discontinuity properties and thermodynamic models

## SE2 Dynamics, mineral physics and tomographic imaging of the Earth's mantle

Convener: Montagner, J.-P.  
 Co-Convener(s): Schmeling, H.  
**Friday, 24 April 1998**  
 Lecture Room: R10  
 Chairperson: Vacher, P.

- 11:00 WALZER, U.; HENDEL, R.  
 A new convection-segregation model explaining the origin of the principal geochemical reservoirs of the Earth's mantle
- 11:15 VAN DER HILST, R.; KARASON, H.  
 Aspherical structure of Earth's lower mantle

- 11:30 BRUNET, D.; YUEN, D.A.; MACHETEL, P.  
Dynamics of superplumes generated by phase transitions and variable viscosity convection
- 11:45 LARSON, E.; EKSTRÖM, G.; TROMP, J.  
Surface-wave polarization tomography
- 12:00 O'CONNELL, R.J.; STEINBERGER, B.  
Effects of mantle flow on the orientation, distribution and motion of plumes and slabs
- 12:15 CADEK, O.; FLEITOUT, L.  
Geoid and dynamic topography for the mantle with a partially permeable boundary between upper and lower mantle
- 12:30 DAVAILLE, A.  
Dynamics and fate of a stratified mantle: mixing and hot spots
- 12:45 ISHII, M.; TROMP, J.  
Normal-mode constraints on mantle structure
- 13:00 LUNCH

Chairperson: N.N.

- 14:00 CORMIER, V.F.  
Anisotropy of heterogeneity scale lengths in the lower mantle
- 14:15 STEINBACH, V.; YUEN, D.A.; VLAAR, N.J.  
The influence of surface temperature on planetary convection with phase transitions
- 14:30 PANKOV, V.L.; BABEYKO, A.A.; KALACHNIKOV, A.A.  
Phase diagrams of the mantle mineral systems and the mantle transition zone
- 14:45 EBERLE, M.A.; GRASSET, O.; SOTIN, C.  
A numerical study of the dynamics of subducting slabs and transport of melt through the mantle wedge
- 15:00 VACHER, P.; TRAMPERT, J.; VLAAR, N.J.  
Temperature, pressure and compositional derivatives of seismic velocities with application to the lower mantle
- 15:15 KHRISTOFOROVA, N.N.  
Heat cells and mantle convection
- 15:30 BREAK

Chairperson: N.N.

- 16:00 BIJWAARD, H.; SPAKMAN, W.; ENGDAHL, E.R.  
Preliminary results from nonlinear global travel-time tomography
- 16:15 RICARD, Y.; MATAS, J.; LE STUNFF, Y.; GUYOT, F.  
Phase transitions in the upper mantle
- 16:30 SOLHEIM, L.P.; PELTIER, W.R.  
Phase transition modulated mantle convection with pressure and temperature dependent rheology: implications for the radial viscosity structure in the Earth
- 16:45 DILLISSE, I.; GOES, S.; GOVERS, R.; VACHER, P.  
Seismic velocity, temperature and composition: the Mendocino triple junction area
- 17:00 THIO, H.K.  
The upper mantle under the Tyrrhenian Sea from a broad-band study of deep earthquakes
- 17:15 VAN DER HILST, R.; SIMONS, F.  
Constraints on the structure of the upper mantle beneath Australia from waveform tomography

- 17:30 LEVEQUE, J.-J.; DEBAYLE, E.  
Lithospheric and asthenospheric structure of the Indian Ocean from a waveform tomography
- 17:45 BILLIEN, M.; TRAMPERT, J.; LEVEQUE, J.-J.  
Global attenuation tomography from fundamental mode surface wave data

Stand-by papers

- BULATOVA, N.P.  
About the ray's angles for the neutrino tomography of the Earth
- BULATOVA, N.P.; NECHAEV, V.V.  
The modelling of irregularities of the Earth crust in 3D matrice's slices
- BULATOVA, N.P.  
The account of the Earth's characteristics along the ray and the sections for the Earth's tomography

18:00 END OF SESSION

### SE3 Seismology and physics of the Earth's core and mantle

Convener: Kind, R.  
Co-Convener(s): Jacob, A.W.B.; Weber, M.  
**Thursday, 23 April 1998**  
Lecture Room: R2  
Chairperson: Weber, M.

- 08:30 SOURIAU, A.  
Inner core rotation: possible artefacts and new data (Solicited Paper)
- 09:00 DEUSS, A.; PAULSEN, H.; TRAMPERT, J.; WOODHOUSE, J.  
Analysis of inner core S- and P-waves
- 09:15 MAJEWSKI, E.; WALKER, D.  
Soret diffusion experiments and implications for the evolution of Earth's core
- 09:30 LIU, X.-F.; TROMP, J.; DZIEWONSKI, A.M.  
On the origin of SCS and PCP precursors
- 09:45 CALMANT, S.; PELLETIER, B.; PILLET, R.; REGNIER, M.; LEBELLEGARD, P.; BORE, J.-M.  
Inter-seismic and co-seismic displacements in GPS series across the New Hebrides subduction zone
- 10:00 CAKIR, Ö.; YILMAZTÜRK, A.  
Model studies of sub-oceanic Po and So waves and their frequency dependence of Q
- 10:15 BREAK

Chairperson: Jacob, A.W.B.

- 10:45 YUAN, X.; KIND, R.; BOCK, G.  
Receiver function constraints on slab geometry and upper mantle discontinuities under northern Chile (Solicited Paper)
- 11:15 LI, X.; YUAN, X.; KIND, R.; ESTABROOK, CH.  
Effects of the subducting Pacific plate on the upper mantle seismic discontinuities
- 11:30 BOCK, G.  
Topography of mantle discontinuities
- 11:45 OLIVIERI, M.; MORELLI, A.  
Constraints on upper mantle discontinuities beneath the Mediterranean region from P-to-S conversions

SE

- 12:00 **ERDURAN, M.; ÇAKIR, Ö.**  
Receiver function analysis for the station TBZ, Turkey
- 12:15 **KUTLU, Y.A.; ÇAKIR, Ö.**  
Shear wave propagation under northeast Anatolia
- 12:30 **CINAR, H.; YILMAZTÜRK, A.; ÇAKIR, Ö.**  
Crustal structure in and around the eastern Turkey from single station Rayleigh wave observations
- 12:45 **GÖKALP, H.; ÇAKIR, Ö.; CHIRABBA, C.**  
Different approaches in the local earthquake tomography: an application on Alban Hills Volcano (Central Italy)
- 13:00 **END OF SESSION**

## **SE5 Geodynamics of the lithosphere: images and models of active tectonics**

Convener: Furlong, K.P.

Co-Convener(s): Wortel, M.J.R.

**Wednesday, 22 April 1998**

Lecture Room: R3

Chairpersons: Furlong, K.P.; Loohuis, J.J.P.

- 08:45 **TORNE, M.; FERNANDEZ, M.; COMAS, M.C.; SOTO, J.I.**  
Lithospheric structure of the Alboran Basin (W-Mediterranean): results from 3D modelling of gravity heat flow and elevation data
- 09:00 **LOOHYIS, J.J.P.; WORTEL, M.J.R.; MEIJER, P.T.H.**  
Modelling of the first order dynamics of the Eurasian plate; application to the Alpine thrust
- 09:15 **PLOMEROVA, J.; BABUSKA, V.; SILENY, J.**  
Variations of seismic anisotropy in European mantle
- 09:30 **LUNDBEK HANSEN, D.; BOM NIELSEN, S.**  
Numerical modelling of crustal shortening and inversion in sedimentary basins
- 09:45 **HEBERT, H.; DEPLUS, C.; DIAMENT, M.**  
Characterization and modelling of the intraplate deformation in the Wharton basin (N-E Indian Ocean)
- 10:00 **NYST, M.; SPAKMAN, W.; SIMONS, W.; AMBROSIUS, B.**  
Inversion of the GEODYSSSEA 94/96 (GPS) data for crustal strain and fault slip
- 10:15 **CUMMINS, P.R.; KANEDA, Y.; HIRANO, S.**  
Modelling of deformation due to subduction along the Japan Trench
- 10:30 **GOVERS, R.**  
Numerical simulations of transpression
- 10:45 **FURLONG, K.P.; ANDERSON, H.**  
Lithospheric tectonics of a transpressional plate boundary: Fiordland, New Zealand
- 11:00 **LAMARCHE, G.; LEBURN, J.-F.; COLLOT, J.-Y.**  
Tectonics at a transform-subduction relay zone. The Puysegur Area, south of New Zealand
- 11:15 **COLLOT, J.-Y.; LEBRUN, J.-F.; LAMARCHE, G.; DELTEIL, J.**  
Transform-subduction transitions: a comparison at both ends of the alpine fault, New Zealand
- 11:30 **LEBRUN, J.-F.; COLLOT, J.-Y.; LAMARCHE, G.**  
Evolution of the PAC/AUS plate boundary south of New Zealand: initiation of the Puysegur subduction along a strike-slip plate boundary
- 11:45 **LUNCH**
- 12:00 **Business Meetings**

Chairpersons: Govers, R.; Schott, B.

- 14:00 **VAN WIJK, J.W.; GOVERS, R.**  
3-D thermal modelling of the southern Californian upper mantle; the tectonic history of microplates
- 14:15 **ROMANYUK, T.V.; MOONEY, W.D.; BLAKELY, R.J.**  
Subduction of a mid-ocean ridge beneath the north-east Pacific margin of North America
- 14:30 **FURLONG, K.P.**  
Mantle driven active tectonics at the Mendocino Triple Junction, California
- 14:45 **SABADINI, R.; VERMEERSEN, L.L.A.; CESCA, S.**  
Post-seismic deformation in a spherical geometry with some applications to real events
- 15:00 **FERNANDEZ, J.; RUNDLE, J.B.; YU, T.-T.**  
Model for inelastic postseismic deformation
- 15:15 **REGENAUER-LIEB, K.; YUEN, D.A.**  
The importance of thermal-mechanical coupling in necking process of an elasto-viscoplastic lithosphere
- 15:30 **REGENAUER-LIEB, K.; HOCHSTEIN, M.P.**  
Mechanically heating and fracturing on ductile shear zones in Asia
- 15:45 **SCHOTT, B.; YUEN, D.A.; SCHMELING, H.**  
The significance of dissipative heating in delamination and subduction processes
- 16:00 **REGENAUER-LIEB, K.; HOCHSTEIN, M.P.**  
Heat generation associated with the collision of two plates: the Himalayan geothermal belt
- 16:15 **END OF SESSION**

## **SE5 Geodynamics of the lithosphere: images and models of active tectonics - Poster Session**

Convener: Furlong, K.P.

Co-Convener(s): Wortel, M.J.R.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Wednesday, 17:00 - 19:00**

Poster Area: RHODES - SE

Chairperson: Malservisi, R.

- SE012 **KORYAKIN E.D.; STROEV, P.A.; GRUSHINSKY, A.N.**  
The global distribution of average (5 x 5 deg.) depths of Moho discontinuity: implication to plate tectonics
- SE013 **FREDERIKSEN, S.; NIELSEN, S.B.; BALLING, N.**  
Numerical modelling of basin evolution in the Norwegian-Danish basin
- SE014 **NICOLLIN, F.; DAUTEUIL, O.; ANGELIER, J.**  
Wavelet analysis of bathymetric profiles from Mid-Atlantic Ridge: tectonic implications
- SE015 **RODNIKOV, A.G.**  
Results of studies of the lithosphere in the transition zone from the Asian continent to the Pacific Ocean by the system of geotraverses
- SE016 **LEBEDEV, S.; NOLET, G.**  
Surface wave diffraction tomography of the southeast Asia marginal basins

- SE017 KREEMER, C.; GOES, S.; GOVERS, R.; HOLT, W.  
Active deformation of eastern Indonesia and the Philippines inferred from seismicity and geodetic data
- SE018 MALSERVISI, R.; FURLONG, K.P.  
Lithospheric response to transpressional plate boundary kinematics
- SE019 MAROTTA, A.M.; FERNANDEZ, M.; SABADINI, R.  
The onset of extension during lithospheric shortening: 2-D dynamical modelling for lithospheric unrooting
- SE020 GERBAULT, M.; POLIAKOV, A.; DAIGNIERES, M.; BUROV, G.  
Initiation of intra-plate subduction due to end-plate compression: numerical approach
- SE021 BIANCHI, S.; DEVENEZIA, D.; GIUNCHI, C.; NEGREDO, A.M.  
Thermal-kinematic model of a subducting slab
- SE022 PARK, J.-O.; AMANO, H.; TSURU, T.; KIDO, Y.; KANEDA, Y.; KONO, Y.  
Geological structure of the western Nankai convergent plate margin as revealed by multi-channel seismic reflection data
- SE023 GARDU, G.  
Evolving tectonic structures in Romania
- SE024 KUCEROVA, L.  
Rock masses transposition and genesis of variscan plutonites in the Bohemian massif
- SE025 SADYKOV, D.; MUKASHEV, K.; BUKREEVA, E.  
Geophysical model of contracting Earth and natural processes
- SE026 KOSTYANEV, S.G.  
Mathematical modelling of the movement of a layer melting in the Earth
- SE027 MOROZOV, V.N.; TATARINOV, V.N.  
Prediction and models of modern crustal movements in the areas of objects of nuclear-fuel cycle
- SE028 BARKIN, YU.V.  
Dynamic regularities of the plate motion
- SE029 BEZERRA, F.H.R.  
Neotectonic deformation in NE Brazil \*

## SE6 Post-glacial rebound and its influence on sea level, crustal deformation and gravity: new observations, modelling results and initiatives

Convener: Mitrovica, J.X.

Co-Convener(s): Vermeersen, L.L.

**Tuesday, 21 April 1998**

Lecture Room: R3

Chairpersons: Mitrovica, J.X.; Vermeersen, L.L.

Editors: Mitrovica, J.X.; Vermeersen, L.L.

11:00 MITROVICA, J.X.; FORTE, A.M.

SE6-001 Joint inversions for mantle viscosity

11:15 VERMEERSEN, L.L.A.; SABADINI, R.; BORGIO,

SE6-002 S.

Joint mantle viscosity inversions of polar wander and geoid changes induced by Pleistocene and contemporary ice mass variations

11:30 FJELDSKAAR, W.

SE6-004 The post-glacial shoreline displacement on Svalbard indicates a high viscosity mantle

11:45 THOMA, M.; WOLF, D.

SE6-005 Modelling of land emergence and secular gravity change in Fennoscandia

12:00 KAUFMANN, G.; WU, P.

SE6-006 Upper mantle lateral viscosity variations and postglacial rebound: application to the Barents Sea

12:15 DI DONATO, G.; VERMEERSEN, L.L.A.;

SE6-007 SABADINI, R.

Multi-layer analytical Earth models of sea level changes induced by present-day glacial instability and post-glacial rebound

12:30 LAMBECK, K.; SMITHER, C.; EKMAN, M.

SE6-003 Tests of glacial rebound models for Fennoscandia based on instrumented sea- and lake-level records

12:45 BREAK

Chairpersons: Vermeersen, L.L.; Mitrovica, J.X.

Editors: Mitrovica, J.X.; Vermeersen, L.L.

14:00 MILNE, G.A.

SE6-008 Recent advances in modelling postglacial sea-level variations (Solicited Paper)

14:30 JAMES, T.S.; HE, J.; WANG, K.

SE6-009 Postglacial rebound in the northern Cascadia subduction zone

14:45 IVINS, E.R.; RAYMOND, C.A.; JAMES, T.S.

SE6-010 Patagonian little ice age rebound

15:00 ARGUS, D.F.; PELTIER, W.R.; WATKINS, M.M.;

SE6-011 HEFLIN, M.B.

Glacial isostatic adjustment from space geodesy

15:15 DAVIS, J.L.; JOHANSSON, J.M.; MITROVICA,

SE6-012 J.X.; MILNE, G.; SCHERNECK, H.-G.

Determinations of mantle viscosity and ice history model parameters from project BIFROST GPS data

15:30 WAHR, J.; VAN DAM, T.; LARSON, K.;

SE6-013 ROBERTSON, D.; FRANCIS, O.

Absolute gravity and GPS measurements in Greenland

15:45 WINGHAM, D.

SE6-014 Antarctic elevation change 1992-1996: implications for mass balance (Solicited Paper)

16:15 HUGHES, T.J.; BELKNAP, D.F.; KELLEY, J.T.;

SE6-015 FASTOOK, J.L.

Modelling isostatic responses of short time and distance scales: the record in the Gulf of Maine

16:30 MÖRNER, N.-A.

SE6-016 Glacial isostasy, eustasy, geoid deformation, rotation, circulation and paleoseismicity

16:45 END OF SESSION

## Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00, Lecture Room R10

**SE6 Post-glacial rebound and its influence on sea level, crustal deformation and gravity: new observations, modelling results and initiatives - Poster Session**

Convener: Mitrovica, J.X.

Co-Convener(s): Vermeersen, L.L.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: RHODES - SE

Chairpersons: Mitrovica, J.X.; Vermeersen, L.L.

Editors: Mitrovica, J.X.; Vermeersen, L.L.

- SE314 **BORETTI, E.**; GIUNCHI, C.; SABADINI, R.  
SE6-017 3D viscosity variations and post-glacial rebound
- SE315 **HANYK, L.**; MATYSKA, C.; YUEN, D.A.  
SE6-018 Instability of compressible viscoelastic models
- SE316 **VERMEERSEN, L.L.A.**; MITROVICA, J.X.  
SE6-019 Gravitational stability of viscoelastic relaxation models
- SE317 **MÄKINEN, J.**  
SE6-020 Absolute-gravity measurements in Finland to study the Fennoscandian postglacial rebound
- SE318 **KAUFMANN, G.**; LAMBECK, K.  
SE6-021 Implications for Pleistocene glaciation of the Tibetan Plateau on present geodetic observables
- SE319 **LE MEUR, E.**; HUYBRECHTS, P.  
SE6-022 A coupled ice sheet-viscoelastic Earth model as a tool to assess the present-day imbalance of the Greenland ice sheet
- SE320 **GRUSHINSKY, A.N.**; KORYAKIN, E.D.;  
SE6-023 **STROEV, P.A.**  
The isostatic model and deep structure of Antarctica

**SE7 Variations in the Earth's rotation: implications for the dynamics and structure of the mantle and for global change processes**

Convener: Sabadini, R.

Co-Convener(s): O'Connell, R.J.

**Monday, 20 April 1998**

Lecture Room: R2

Chairperson: N.N.

- 11:00 **MITROVICA, J.X.**; MILNE, G.A.  
Glacial isostatic adjustment and the Earth's rotation: new insights into an old problem
- 11:15 **VERMEERSEN, L.L.A.**  
Polar wander, sea-level variations and ice age cycles (Solicited Paper)
- 11:45 **MOUND, J.E.**; MITROVICA, J.X.  
True polar wander as a mechanism for long term sea level variations
- 12:00 **RICARD, Y.**; RICHARDS, M.; LITHGOW, C.;  
SABADINI, R.; SPADA, G.  
Long term stability of Earth's rotation axis
- 12:15 **SABADINI, R.**; VERMEERSEN, L.L.A.;  
MALSERVISI, R.  
The long-term rotation dynamics of the Earth
- 12:30 **LUNCH**

Chairperson: N.N.

- 14:00 **GORDON, R.G.**; PETRONOTIS, K.; ACTON, G.;  
JOHNSON, B.; VASAS, S.  
Apparent polar wander of the hotspots: the view from the Pacific
- 14:15 **DEVOTI, R.**; FERMI, M.; LANOTTE, R.; LUCERI, V.;  
PACIONE, R.; RUTIGLIANO, P.;  
SCIARETTA, C.; VESPE, F.  
Earth orientation parameters measured by space geodesy techniques
- 14:30 **O'CONNELL, R.J.**; STEINBERGER, B.  
True polar wander and hot-spot motion during the cenozoic from mantle flow models
- 14:45 **YODER, C.F.**  
Contributions to present-day polar motion, J2 and UT1 changes (Solicited Paper)
- 15:15 **MÖRNER, N.-A.**  
Earth rotation and global changes
- 15:30 **TYAPKIN, K.F.**  
Magnetic field of the Earth as a result of variation of its rotation regime
- 15:45 **KIRIAN, G.V.**  
Movement of Earth's instant pole of rotation
- 16:00 **EVANS, D.A.**  
Multiple episodes of rapid true polar wander in Vendian-Cambrian time
- 16:15 **Concluding Remarks**
- 16:30 **END OF SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

**SE7 Variations in the Earth's rotation: implications for the dynamics and structure of the mantle and for global change processes - Poster Session**

Convener: Sabadini, R.

Co-Convener(s): O'Connell, R.J.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: RHODES - SE

- SE166 **ALFONSI, L.**; SPADA, G.; BOSCHI, E.  
Effects of subductions and trends in seismically-induced rotational variations
- SE167 **ZAKHAROV, G.**; TYRNOV, F.  
The relationship between solar wind energy and 27-day non-tidal variations in the length of day

**SE8 Sedimentary basin modelling and integration of geophysical and sedimentary geology data - Poster Session**

Convener: Cloetingh, S.

Co-Convener(s): Horvath, F.; Sassi, W.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: RHODES - SE

Co-sponsored by: International Lithosphere Program

Chairpersons: Gabrielsen, R.H., Delvaux, D.

- SE321 **BEEKMAN, F.**; BUROV, E.; CLOETINGH, S.  
Tectonic modelling of the late cenozoic thick-skinned crustal deformation in central Asia

- SE322 **VAN DER MEER, R.**; VAN WEES, J.D.; GÖLKE, M.; BEEKMAN, F.  
Present-day lithospheric strength of the Norwegian continental Voring margin and predictions of late Tertiary deformation
- SE323 **MIRANDA, J.V.**; EBINGER, C.J.; FAIRHEAD, J.D.  
Regional gravity and aeromagnetic investigation of the Takutu basin, Brazil and Guyana
- SE324 **DIRKZWAGER, J.B.**; LEGOSTAEVA, O.V.; YEGOROVA, T.P.; STEPHENSON, R.A.; VAN WEES, J.D.  
Gravity anomalies used in 3D-basin analysis of the Dutch on- and offshore
- SE325 **YEGOROVA, T.P.**; KOZLENKO, V.G.; STAROSTENKO, V.I.; LEGOSTAEVA, O.V.; STEPHENSON, R.A.  
Structure of the lithosphere beneath the Dnieper-Donets Basin, Ukraine, according to gravity data
- SE326 **KAPE, S.**; OSBORNE, R.  
Identification of sediment dispersal pathways using 3D palinspastic reconstruction
- SE327 **KLESPIER, C.**; SCHECK, M.; BAYER, U.  
Modelling of salt dynamics in the northeast German basin
- SE328 **MERRIAM, D.F.**; FÖRSTER, A.  
Comparison and integration of geophysical and sedimentological data for basin modelling
- SE329 **BARYKIN, S.K.**; MUSHIN, I.A.  
Structural-formational modelling of sedimentary basins
- SE330 **HEIKKINEN, P.J.**; KORJA, A.; AARO, S.  
Bothnian Sea - a mesoproterozoic extensional basin
- SE331 **NADOR, A.**; JUHASZ, E.  
Neogene basement faulting and subsequent karstic rejuvenation: the oil-bearing Zala basin, SW Hungary
- SE332 **BERASTEGUI, X.**; BANKS, C.J.; PUIG, C.; TABERNER, C.; WALTHAM, D.; FERNANDEZ, M.  
Lateral diapiric emplacement of triassic evaporites at the southern margin of the Guadalquivir Basin, Spain
- SE333 **ERSHOV, A.V.**; BRUNET, M.-F.; KOROTAEV, M.V.  
Northern fore-Caucasus molasse basin: burial history and flexural modelling
- SE334 **MONGELLI, F.**; PALUMBO, F.  
2D and 3D modelling of the thermal evolution of sedimentary basins and their applications
- SE335 **KHODYREVA, E.J.A.**  
The quantitative estimation of geological characteristics of sedimentary basins by geothermal parameters
- SE336 **SAFANDA, J.**; SUCHY, V.  
Thermal effect of the central Bohemian granitic pluton (Czech Republic) on the adjacent sediments: results of computer simulation
- SE337 **IOGANSON, L.I.**; KUNIN, N.YA.; MILETENKO, N.V.  
Application of the geophysical data for sedimentary basin investigation
- SE338 **RODNIKOV, A.G.**  
The deep structure of the sedimentary basin of the Okhotsk Sea and its comparison with other sedimentary basins of the world
- SE338A **SVALOVA, V.B.**  
Sedimentary basins formation and evolution. Case study of the pre-Caspian depression and sedimentary basins of Brazil.
- SE338B **LAZAUSKIENE, J.**; SLIAUPA, S.; POPRAWA, P.; STEPHENSON, R.A.; VAN WEES, J.-D.  
Flexural model of the Silurian Baltic Basin on the western margin of the east European craton
- SE338C **ISMAIL-ZADEH, A.**  
The Devonian to Permian subsidence mechanisms of the east European basins

## SE8 Sedimentary basin modelling and integration of geophysical and sedimentary geology data

Convener: Cloetingh, S.

Co-Convener(s): Horvath, F.; Sassi, W.

**Friday, 24 April 1998**

Lecture Room: HERMES

Co-sponsored by: International Lithosphere Program

Chairperson: Cloetingh, S.

08:30 CLOETINGH, S.

Integrated basin studies: introduction to the session

08:45 ZIEGLER, P.A.

Mechanical controls on collision-related compressional intraplate deformation (Solicited Paper)

09:15 Presentation of ILP E.A. Flinn Award to J.-D. van Wees

09:30 ROURE, F.

Multi-scale strain partitioning and wedging during intraplate deformations (Solicited Paper)

10:00 PYSKLYWEC, R.N.; MITROVICA, J.X.

A mantle flow mechanism for the large-scale subsidence of continental interiors

10:15 TER VOORDE, M.; VAN BALEN, R.T.; BERTOTTI, G.; CLOETINGH, S.A.P.L.

The influence of a stratified rheology on the flexural response of the lithosphere to (un)loading by extensional faulting

10:30 BREAK

Chairperson: Sassi, W.

11:00 **VAN WEES, J.-D.**; BEEKMAN, F.

DIRKZWAGER, J.; CLOETINGH, S.

Controls of preceding tectonic history on neotectonics and earthquakes in the Roer Valley Graben (The Netherlands): constraints from rheological and finite element modelling

11:15 **FISCHER, K.D.**; JENTZSCH, G.; SÜSS, P.; SCHÄFER, A.

Geodynamic finite-element-modelling of foreland basins

11:30 **GARCIA-CASTELLANOS, D.**; FERNANDEZ, M.; TORNE, M.

Numerical modelling of the evolution of the Guadalquivir Foreland Basin (south Spain)



- 11:45 **VIDOTTI, R.M.**; EBINGER, C.J.; FAIRHEAD, J.D.  
T<sub>E</sub> estimates beneath paleozoic-mesozoic Parana and Parnaiba basins, Brazil
- 12:00 **BUROV, E.B.**; POLIAKOV, A.; CLOETINGH, S.  
Erosional forcing on the basin evolution
- 12:15 **VAN BALEN, R.T.**  
Erosion/sedimentation modelling of the Maas catchment in relation to climate and tectonics
- 12:30 **NEUBAUER, F.**; HANDLER, R.; MADER, D.; SCHNEIDER, D.  
Evolution of Alpine-Carpathian sedimentary basins seen through detrital mica: new <sup>40</sup>Ar/<sup>39</sup>Ar mica ages
- 12:45 LUNCH

Chairperson: Ben-Avraham, Z.

- 14:00 **KLESER, C.**; SCHECK, M.; BAYER, U.  
Problems of salt dynamics for 3D-backstripping
- 14:15 **BADA, G.**; CLOETINGH, S.; FODOR, L.; HORVATH, F.  
Cenozoic structural evolution of the Pannonian basin: paleostress data and finite element stress models
- 14:30 **GÖLKE, M.**; VAN WEES, J.D.; VAN DER MEER, R.; KARPUZ, R.; WILHELMS, A.; BEEKMAN, F.; CLOETINGH, S.  
Present-day strain at the mid-Norwegian margin
- 14:45 **SKAR, T.**; VAN BALEN, R.; ARNESEN, L.  
Tectonic stress and its influence on fluid flow: a case study from the mid-Norwegian margin
- 15:00 **BEEKMAN, F.**; VAN WEES, J.-D.  
Faulting, fracturing and in-situ stress prediction in hydrocarbon reservoirs: a finite element approach
- 15:15 **GRIGO, D.**; DATURI, C.; MOSCONI, A.; PALMIERI, G.  
Egypt - Gulf of Suez: tectonic evolution and petroleum system definition with a 3D basin modelling approach
- 15:30 BREAK

Chairperson: Horvath, F.

- 15:45 **AUBOURG, C.**  
The early Layer Parallel Shortening (LPS) as revealed by magnetic fabric
- 16:00 **SAMUELSSON, J.**; MIDDLETON, M.F.  
Thermal modelling of maturation in rift-related basins
- 16:15 **SACCHI, M.**; HORVATH, F.  
The importance of stratigraphic control in understanding the late neogene tectonic evolution of SW Pannonian basin
- 16:30 **AIELLO, G.**; DE ALTERIIS, G.; MARSELLA, E.; SACCHI, M.  
New seismic data along the latium-campania offshore (eastern Tyrrhenian margin)
- 16:45 **MILIA, A.**; TORRENTE, M.M.  
Multi-stage transtensional events and sedimentary responses in the eastern Tyrrhenian margin (Italy)
- 17:00 **KAYA, O.**; SARY, C.; PALK, M.; GÖKTAP  
Büyük Menderes multipartite graben
- 17:15 **GINZBURG, A.**; BEN-AVRAHAM, Z.  
The deep structure of the Dead Sea
- 17:30 **HOJKA, A.M.**; ZELT, C.; FLUEH, E.R.  
3D seismic refraction tomography of ocean bottom hydrophone data recorded offshore Valparaiso, Chile

- 17:45 **DELVAUX, D.**  
Tectonic and climate influences on late cenozoic mountain building and basin formation in east-central Asia
- 18:00 **REEMST, P.**; PASCAL, C.; **GABRIELSEN, R.**; FOSSEN, H.; LEPVRIER, C.  
Post-Caledonian evolution of tectonic stresses in the northern North Sea area \*
- 18:15 END OF SESSION

## SE10 Fault interaction and earthquake mechanics

Convener: Das, S.

Co-Convener(s): Cocco, M.

Monday, 20 April 1998

Lecture Room: R3

Chairperson: Das, S.

- 08:30 **MADARIAGA, R.**  
The origin of complexity in seismic sources (Solicited Paper)
- 09:00 **COTTON, F.**; HERNANDEZ, B.; CAMPILLO, M.  
Looking for supersonic rupture velocities
- 09:15 **COCCO, M.**; BELARDINELLI, M.E.; COUTANT, O.; COTTON, F.  
Dynamic versus static stress changes: inferences on the earthquake nucleation process
- 09:30 **DARROZES, J.**; GAILLOT, P.; COURJAULT-RADE, P.  
Method for multi-scale structural and temporal analysis of epicentral distribution of an earthquake sequence using anisotropic wavelets
- 09:45 **DRAGONI, M.**; **PIOMBO, A.**  
A model of fault indentation
- 10:00 **BOUR, O.**; DAVY, P.  
Clustering and size distributions of fault patterns: theory and measurements
- 10:15 **PELLETIER, J.D.**  
Slip distributions and source-time functions in a heterogeneous slider-block model
- 10:30 BREAK

Chairperson: Das, S.

- 11:00 **OHNAKA, M.**  
A role of the constitutive law in scaling scale-dependent physical quantities inherent in shear rupture (Solicited Paper)
- 11:30 **BOUISO, S.**; PETIT, J.-P.; BARQUINS, M.  
Contact loss during stick-slip: from experimental evidence to insights for seismic behaviour
- 11:45 **IVINS, E.R.**  
Postseismic transience & the heterogeneous rheology of the deep crust
- 12:00 **PASCAL, C.**; ANGELIER, J.; LEPVRIER, C.  
Numerical modelling of fault interaction using the 3D distinct element method
- 12:15 **MILLER, S.A.**  
Temporal variations in scaling relationships of a fluid-controlled fault in a self-organized critical state
- 12:30 LUNCH

Chairperson: Cocco, M.

- 14:00 **SARAO, A.**; BURLO, Z.; SUHADOLC, P.  
Strong motion modelling for the 1976 Friuli earthquake (NE Italy)
- 14:15 **SCOTTI, O.**  
Mechanics of the Vuache fault (French Alps) based on historical and instrumental data
- 14:30 **ANGELIER, J.**; BERGERAT, F.; ROGNVALDSSON, S.  
Seismogenic stress field in the south Iceland seismic zone
- 14:45 **BERGERAT, F.**; ANGELIER, J.  
Neotectonic evidence from field studies of recent faulting in the South Iceland Seismic Zone (SISZ)
- 15:00 **GARDI, A.**; COCCO, M.; NEGREDO, A.; SABADINI, R.; SINGH, S.K.  
Stress changes in the subducted plate caused by large, shallow, thrust earthquakes: an application to the Benioff zone of Mexico
- 15:15 **SHAMIR, G.**  
Spatial and temporal seismicity patterns associated with interacting fault segments - the case of the southern Dead Sea transform
- 15:30 **SHOMALI, Z.-H.**  
Empirical Green's functions calculated from inversion of earthquake radiation patterns
- 15:45 **MAJEWSKI, E.**; TEISSEYRE, R.  
Earthquake thermodynamics and earthquake shear band model
- 16:00 Concluding Remarks  
16:15 END OF SESSION  
17:00 Opening  
19:30 Reception

### SE10 Fault interaction and earthquake mechanics - Poster Session

Convener: Das, S.  
Co-Convener(s): Cocco, M.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: RHODES - SE  
Chairpersons: Das, S.; Cocco, M.

- SE031 **KUZNETSOV, V.V.**  
The self-organization of the cracks arising during loading the rock as the reason of earthquake
- SE032 **PIERSANTI, A.**; NOSTRO, C.; COCCO, M.  
Fault interaction caused by elastic (static) and viscoelastic (postseismic) stress changes
- SE033 **LYSKOVA, E.**; ROSLOV, YU.; YANOVSKAYA, T.  
Source radiation spectra in subduction and spreading zone

---

**Attend the Poster Session**

---

### SE11 Lithospheric dynamic processes as seen from geomorphology

Convener: Brun, J.-P.  
Co-Convener(s): Kirby, M.  
Tuesday, 21 April 1998  
Lecture Room: R2  
Chairperson: N.N.

- 11:00 **UFIMTSEV, G.F.**  
Relief of the Earth surface, geoid and foot of mantle: a comparison
- 11:15 **NIVIERE, B.**; MARQUIS, G.; MAURIN, J.-C.  
Morphologic dating of slowly evolving scarp using a diffusive analogue
- 11:30 **BASILE, C.**; ALLEMAND, P.  
Erosion as the main mechanism of uplift along transform faults
- 11:45 **BOURGEOIS, O.**; DAUTEUIL, O.  
Rift pattern and ice flow in Iceland during the alst glaciation
- 12:00 **VAN DER BEEK, P.**; BRAUN, J.; SUMMERFIELD, M.; BROWN, R.  
Morphotectonic evolution of rifted margins: not just flank uplift and escarpment retreat
- 12:15 **PELLETIER, J.D.**  
Modelling the geomorphic response to tectonism
- 12:30 **D'AGOSTINO, N.**; CHAMOT-ROOKE, N.; FUNICIELLO, R.  
Spectral analysis of topography in extensional settings: inferences on the quaternary extensional tectonics of the Apennines (central Italy)
- 12:45 **WINTER, TH.**; LENOTRE, N.  
Geomorphology: a tool to estimate the activity of faults in France (example of external Jura) \*
- 13:00 END OF SESSION

### SE11 Lithospheric dynamic processes as seen from geomorphology - Poster Session

Convener: Brun, J.-P.  
Co-Convener(s): Kirby, M.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: RHODES - SE

- SE034 **BORDONI, P.**; VALENSISE, G.  
Variable wavelength tectonic processes in peninsular Italy revealed by a systematic reassessment of 125 ka marine terrace data
- SE035 **PICCARDI, L.**; GAUDEMER, Y.; TAPPONNIER, P.; BOCCALETTI, M.  
Holocene kinematics of the Fucino basin (central Apennines, Italy)
- SE036 **MAKARENKO, G.F.**  
Global geomorphology attests against mobilistic models
- SE037 **PERELADOV, M.**; VILKOVA, O.  
The experience of estimation of geomorphological situation on the shallows, based on the analysis of the land geology (Sakhalin instance)

SE

## SE12 From the Arctic to the Mediterranean: salt, shale and igneous diapirs in and around Europe

Convener: Mart, Y.  
Co-Convener(s): Vendeville, B.C.  
**Thursday, 23 April 1998**  
Lecture Room: R3  
Chairperson: Vendeville, B.C.

- 11:00 TALBOT, C.J.  
Rates of salt extrusion in the Zagros (Solicited Paper)
- 11:30 VENDEVILLE, B.C.  
Tectonics vs. buoyancy as the drive for active diapiric growth
- 11:45 HOOPER, R.J.; VENDEVILLE, B.C.; BERGFJORD, E.; EVANS, N.; COLLERAN, J.; GUNN, C.  
Diapir rejuvenation by contraction
- 12:00 PENGE, J.; MUNNS, J.W.; TAYLOR, B.  
Examples of extensional and compressional rift-rift tectonics from the Zechstein evaporitic basins of northwest Europe
- 12:15 DAVISON, I.; EVANS, N.; ALSOP, I.; SAFARICZ, M.  
Central graben salt diapirs fields, N. Sea: geometry and structural evolution
- 12:30 GUERIN, G.; VENDEVILLE, B.; RAILLARD, S.  
Triassic structural distribution of the Zechstein salt in southern North Sea and consequences for further tectonic history
- 12:45 SPENCER, P.; VENDEVILLE, B.; NILSEN, K.; WHITAKER, M.; JAHRE, H.; ROBAK, H.  
Dynamic sequence stratigraphic prediction and thin-skinned extension: examples from the Varg Trend, Norwegian North Sea
- 13:00 LUNCH
- Chairperson: Mart, Y.
- 14:00 SCHECK, M.; BAYER, U.; KLESPER, C.  
Structure and evolution of salt in the northeast German basin - conclusions from 3D modelling
- 14:15 APOTRIA, T.  
Relationship of salt evacuation in growth fault displacement transfer, Gulf of Mexico
- 14:30 MASCLE, J.; SHIPBOARD SCIENTIFIC PARTY  
Mud and evaporite deformations from the eastern Mediterranean Sea: evidences from the Prised II cruise (RV Atalante)
- 14:45 MART, Y.  
Diapirism and neotectonic activity in the southeastern Mediterranean
- 15:00 KRYLOV, O.; ERGUN, M.; CIFEI, G.  
The recent structure and mud diapirs of the south-east of Crimea's continental margin
- 15:15 BEHRMANN, J.H.; KOPF, A.  
Extrusion mechanics in active mud volcanoes on the Mediterranean ridge
- 15:30 KOPF, A.; BEHRMANN, J.H.  
Quantitative approach to the extrusion dynamics of active mud volcanoes on the Mediterranean ridge
- 15:45 CLEMENS, J.D.; PETFORD, N.; MAWER, C.K.  
Granites are not diapiric!

- 16:00 VIGNERESSE, J.L.  
Arguments against diapiric emplacement of granitic plutons in the brittle upper crust
- 16:15 HUTTON, D.  
Igneous diapirism (Solicited Paper)
- 16:45 RINGENBACH, J.-C.; GOUT, C.; UNTERNEHR, P.  
Superimposed salt tectonics in the Dutch southern North Sea: from gravity gliding to gravity spreading (Poster)
- 16:50 ROSSETTI, F.; ACOCELLA, V.; FACCENNA, C.; FUNNICIELLO, R.; LAZZAROTTO, A.  
Neogene strike-slip faulting and pluton emplacement in southern Tuscany (Italy) (Poster)
- 16:55 SVALOVA, V.B.  
The effect of rising mantle diapirs on formation and evolution of topographic relief (Poster)
- 17:00 ISMAIL-ZADEH, A.; VOLOZH, YU.; NAIMARK, B.; TALBOT, C.  
Quantitative modelling of the evolution of salt structures in the pre-Caspian basin, Russia (Poster)
- 17:05 END OF SESSION

## SE12 From the Arctic to the Mediterranean: salt, shale and igneous diapirs in and around Europe - Poster Session

Convener: Mart, Y.  
Co-Convener(s): Vendeville, B.C.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:30 - 19:00**  
Poster Area: RHODES - SE

- SE339 RINGENBACH, J.-C.; GOUT, C.; UNTERNEHR, P.  
Superimposed salt tectonics in the Dutch southern North Sea: from gravity gliding to gravity spreading
- SE341 ROSSETTI, F.; ACOCELLA, V.; FACCENNA, C.; FUNNICIELLO, R.; LAZZAROTTO, A.  
Neogene strike-slip faulting and pluton emplacement in southern Tuscany (Italy)
- SE341A SVALOVA, V.B.  
The effect of rising mantle diapirs on formation and evolution of topographic relief
- SE341B ISMAIL-ZADEH, A.; VOLOZH, YU.; NAIMARK, B.; TALBOT, C.  
Quantitative modelling of the evolution of salt structures in the pre-Caspian basin, Russia

## SE13 Intraplate earthquakes, stresses and large scale tectonic structure - Poster Session

Convener: Gregersen, S.  
Co-Convener(s): Panza, G.F.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: RHODES - SE  
Chairperson: Gregersen, S.

- SE110 MÜLLER, B.; SPERNER, B.; WEHRLE, V.; FUCHS, K.  
The new release of the World Stress Map

- SE111 GREGERSEN, S.  
Change of stress since the ice age in Scandinavia
- SE112 HICKS, E.C.; BUNGUM, H.; LINDHOLM, C.D.; OLESEN, O.  
New seismicity and focal mechanism stress data from Ranafjord, northern Norway
- SE113 WENDT, J.; DIETRICH, R.  
Geodetic investigations on recent crustal deformations in the seismoactive zone of Saxon Vogtland
- SE114 MUSACCHIO, G.; MOONEY, W.D.  
Imaging an intraplate zone of seismicity: the Blytheville Arch in the new Madrid seismic zone
- SE115 HERRAIZ, M.; DE VICENTE, G.; LINDO, R.; GINCI, J.; SIMON, J.L.; GONZALEZ CASADO, J.M.; VADILLO, O.; RODRIGUEZ-PASCUA, M.; CICUENDEZ, J.I.; CASAS, A.; CABANAS, I.; RINCON, P.; CORTES, A.; RAMIREZ, M.; LUCINI, M.  
Recent (upper miocene) and present stress states in Spain obtained in the Sigma project
- SE116 IOGANSON, L.I.; REISNER, G.I.  
Heterogeneity of the intraplate areas and seismicity
- SE117 BETZL, N.; HEINRICH, R.; HEMMANN, R.; JENTZSCH, G.; KAISER, D.; KRACKE, D.; ZIEGERT, A.  
A new small seismic network for eastern Thuringia \*
- SE117A BALA, A.; RADULIAN, M.; POPA, M.  
Earthquake distribution and regional tectonic structure in Vrancea zone - Romania
- SE117B ISMAIL-ZADEH, A.; KEILIS-BOROK, V.; SOLOVIEV, A.; PANZA, G.  
Numerical modelling of slap dynamics beneath the Vrancea region, Romania

#### SE14 Modern rifts: plumes, kinematic conditions and lithospheric inhomogeneities

Convener: Deverchere, J.

Co-Convener(s): Achauer, U.; Hansen, U.

Wednesday, 22 April 1998

Lecture Room: R9

Co-sponsored by: Geosciences Azur UMR 6526, Univ. Pierre et Marie Curie, Villefranche-sur-Mer, France (GEOAZUR); Ecole et Observatoire des Sciences de la Terre, CNRS EP-533, Strasbourg, France (EOST Strasbourg), IGCP 400 "Geodynamics of Continental rifting" (UNESCO)

Chairperson: Keller, G.R.

- 09:00 ACHAUER, U.  
Seismic tomography and continental rifts: a review
- 09:30 MECHIE, J.; KRISP WORKING GROUP  
The structure and evolution of the Kenya rift (Solicited Paper)
- 10:00 MGUIRE, P.K.H.; THYBO, H.; BIRT, C.S.; KHAN, M.A.  
Wide-angle reflection study of lower crustal magmatic processes in the Kenya Rift
- 10:20 MULUGETA, G.; GHEBREAB, W.; TALBOT, C.  
Modelling lateral extension and rifting in a stratified lithosphere with applications to the Afro-Arabian rift system

- 10:40 HUISMANS, R.; PODLADCHIKOV, Y.; CLOETINGH, S.  
Mantle lithosphere R-T instability, FEM modelling of convective upwelling of mantle lithosphere beneath rifts zones
- 11:00 LARSEN, T.B.; YUEN, D.A.  
Stress field, viscosity and shear heating distribution in mantle upwellings: a comparison between Newtonian and non-Newtonian rheologies
- 11:20 MALAMUD, B.D.; TURCOTTE, D.L.  
Global heat flow and the frequency-size distribution of plume strengths
- 11:40 LUNCH
- 12:00 Business Meetings
- Chairperson: Ebinger, C.
- 14:00 KELLER, G.R.  
An overview of the structure and evolution of the Rio Grande rift, southwestern North America (Solicited Paper)
- 14:30 KOULAKOV, I.; DEVERCHERE, J.; PETIT, C.  
Structure of the crust and upper mantle beneath the Baikal Rift from teleseismic and local tomography
- 14:50 FERRACCIOLI, F.; BOZZO, E.; SPANO, M.; ARMADILLO, E.  
New geophysical constraints on the west Antarctic-Rift-Transantarctic mountains tectonodynamical system
- 15:10 ZHOU, Z.; LIAO, Z.; JIANG, J.  
The Okinawa Trough: continental rifting in a back arc setting
- 15:30 STEINBERGER, B.; MARQUART, G.  
Evidence for hotspot motion from the Easter track/Nazca plate
- 15:50 PETIT, C.; EBINGER, C.; BUROV, G.  
Rifting and flexure of the continental lithosphere: comparison between the east-African and Baikal rifts (Poster)
- 15:55 POPOV, A.M.; KISELEV, A.I.  
The Baikal rift as structural expression of pre-existing lithospheric inhomogeneities in central Asia (Poster)
- 16:00 SOKOLOVA, YU.F.; MIRONOVA, N.A.; KARAKIN, A.V.  
Crustal structure of Baikal rift - inhomogeneities and evolution through geological time (Poster)
- 16:05 LESNE, O.; CALAIS, E.; DEVERCHERE, J.; CHERY, J.; HASSANI, R.  
Active deformation mechanisms in the Baikal rift zone using two-dimensional numerical models (Poster)
- 16:10 GUSEV, A.; PETROVA, N.; SHABALIN, N.  
Crustal melting of Volga-Ural oil bearing province by action of Volga-Kama's plume (Poster)
- 16:15 EBINGER, C.; SLEEP, N.  
Cratonic roots, mantle plumes, and the east African rift system (Poster)
- 16:20 KHAN, M.A.; MECHIE, J.; JACOB, B.; KELLER, G.R.; MAGUIRE, P.K.H.; PRODEHL, C.; THYBO, H.; HAAK, V.  
The KRISP investigations of lithospheric structure and dynamics of the Kenya rift (Poster)

- 16:25 DELVAUX, D.; KUCHAI, O.; SANKOV, V.; DEHANDSHUTTER, B.; VAN DER MEER, R.; HENDRIKS, B.; PETIT, C.  
Transition from Baikal Rift to Altai-Sayan transpressional settings in east-central Asia (Poster)
- 16:30 ALLEN, R.M.; NOLET, G.; MORGAN, W.J.; VOGFJORD, K.; BERGSSON, B.H.; ERLENDSSON, P.; FOULGER, G.R.; JACOBSDOTTIR, S.; JULIAN, B.R.; PRITCHARD, M.; RAGNARSSON, S.; STEFANSSON, R.  
Iceland's hot narrow plume (Poster)
- 16:35 GUSEV, A.; PETROVA, N.  
Hot spots on the Russian craton and exogenetic manifestation of the Volga-Kama's plume (Poster)
- 16:40 END OF SESSION

#### SE14 Modern rifts: plumes, kinematic conditions and lithospheric inhomogeneities - Poster Session

Convener: Deverchere, J.

Co-Convener(s): Achauer, U.; Hansen, U.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: RHODES - SE

Co-sponsored by: Geosciences Azur UMR 6526, Univ. Pierre et Marie Curie, Villefranche-sur-Mer, France (GEOAZUR); Ecole et Observatoire des Sciences de la Terre, CNRS EP-533, Strasbourg, France (EOST Strasbourg), IGCP 400 "Geodynamics of Continental rifting" (UNESCO)

Chairperson: Mechie, J.

- SE039 PETIT, C.; EBINGER, C.; BUROV, G.  
Rifting and flexure of the continental lithosphere: comparison between the east-African and Baikal rifts
- SE040 POPOV, A.M.; KISELEV, A.I.  
The Baikal rift as structural expression of pre-existing lithospheric inhomogeneities in central Asia
- SE041 SOKOLOVA, YU.F.; MIRONOVA, N.A.; KARAKIN, A.V.  
Crustal structure of Baikal rift - inhomogeneities and evolution through geological time
- SE042 LESNE, O.; CALAIS, E.; DEVERCHERE, J.; CHERY, J.; HASSANI, R.  
Active deformation mechanisms in the Baikal rift zone using two-dimensional numerical models
- SE043 GUSEV, A.; PETROVA, N.; SHABALIN, N.  
Crustal melting of Volga-Ural oil bearing province by action of Volga-Kama's plume
- SE044 EBINGER, C.; SLEEP, N.  
Cratonic roots, mantle plumes, and the east African rift system
- SE045 KHAN, M.A.; MECHIE, J.; JACOB, B.; KELLER, G.R.; MAGUIRE, P.K.H.; PRODEHL, C.; THYBO, H.; HAAK, V.  
The KRISP investigations of lithospheric structure and dynamics of the Kenya rift
- SE046 DELVAUX, D.; KUCHAI, O.; SANKOV, V.; DEHANDSHUTTER, B.; VAN DER MEER, R.; HENDRIKS, B.; PETIT, C.  
Transition from Baikal Rift to Altai-Sayan transpressional settings in east-central Asia

- SE047 ALLEN, R.M.; NOLET, G.; MORGAN, W.J.; VOGFJORD, K.; BERGSSON, B.H.; ERLENDSSON, P.; FOULGER, G.R.; JACOBSDOTTIR, S.; JULIAN, B.R.; PRITCHARD, M.; RAGNARSSON, S.; STEFANSSON, R.  
Iceland's hot narrow plume

- SE048 GUSEV, A.; PETROVA, N.  
Hot spots on the Russian craton and exogenetic manifestation of the Volga-Kama's plume

#### SE15 Crustal structure revealed by scientific drilling

Convener: Lauterjung, J.

Tuesday, 21 April 1998

Lecture Room: R3

Chairperson: N.N.

- 08:45 PEZARD, P.A.; CELERIER, B.  
Structure and tectonic stresses in oceanic basement holes drilled by DSDP and ODP
- 09:00 KÜCK, J.; LAUTERJUNG, J.; WOHLGEMUTH, L.  
KTB Deep Crustal Lab - exploring the deep on the long-term
- 09:15 KHRISTOFOROVA, N.N.; KHRISTOFOROV, A.V.; MUSLIMOV, R.C.; PANARINA, G.I.  
Temperature distribution and anomalies in the crystal basement
- 09:30 PECHNIG, R.; WOHLBERG, J.; PEVZNER, L.; JUHLIN, CH.  
Logging for structures and crustal composition in the scientific borehole Uralskaya SG-4
- 09:45 BOREVSKY, L.V.; MILANOVSKY, S.  
New data about peculiarities of physical properties in the Kola superdeep hole
- 10:00 SOUPIO, P.; AYARZA, P.; JUHLIN, C.; PAPAACHOS, C.; TSOKAS, G.  
Seismic tomography image of the area near the Urals superdeep borehole SG4 (Poster)
- 10:05 SMIRNOV, J.; KOUZNETSOVA, E.; GALDIN, N.  
Geophysical investigations on the base of the Kola superdeep borehole (Poster)
- 10:10 AYARZA, P.; JUHLIN, C.; PEVZNER, L.; BLITNESOV, M.; HISMATULIN, T.; RYBALK, A.  
Structure of the upper crust in SG4 borehole area from vertical incidence and VSP data (Poster)
- 10:15 KOUZNETSOV, I.; SVALOVA, V.; SMIRNOV, J.; KOUZNETSOVA, E.  
Crustal structure revealed by scientific drilling of the Kola superdeep borehole (Poster)
- 10:20 END OF SESSION

---

### Geophysical Journal International

### Journal of Geodynamics

### Tectonics

EGS journals for the publication of your contribution

---

## SE15 Crustal structure revealed by scientific drilling - Poster Session

Convener: Lauterjung, J.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

- SE049 SMIRNOV, J.; KOUZNETSOVA, E.; GALDIN, N.  
Geophysical investigations on the base of the Kola superdeep borehole
- SE050 AYARZA, P.; JUHLIN, C.; PEVZNER, L.; BLITNESOV, M.; HISMATULIN, T.; RYBALK, A.  
Structure of the upper crust in SG4 borehole area from vertical incidence and VSP data
- SE050A KOUZNETSOV, I.; SVALOVA, V.; SMIRNOV, J.; KOUZNETSOVA, E.  
Crustal structure revealed by scientific drilling of the Kola superdeep borehole
- SE050B SOUPIOS, P.; AYARZA, P.; JUHLIN, C.; PAPAACHOS, C.; TSOKAS, G.  
Seismic tomography image of the area near the Urals superdeep borehole SG4

## SE16 3-D crustal imaging of France

Convener: Ledru, P.

Co-Convener(s): Fuchs, K.; Galdeano, A.

Thursday, 23 April 1998

Lecture Room: R10

Chairperson: Gee, D.G.

Editor: Ledru, P.

08:30 PFIFFNER, O.A.

SE16-001 3D crustal structure of the Swiss Alps: lateral changes in space and time (Solicited Paper)

09:00 FRECHET, J.; BETHOUX, N.; CAMPILLO, M.; CATTANEO, M.; PAUL, A.; THOUVENOT, F.; AUGLIERA, P.; GUIGUET, R.; JENATTON, L.; LANZA, V.; PEDERSEN, H.; SPALLAROSSA, D.; SUE, C.; GEOFF TEAM

A dense temporary seismic network in the W. Alps

09:15 PAUL, A.; THOUVENOT, F.; FRECHET, J.; CATTANEO, M.; SPALLAROSSA, D.; BETHOUX, N.

Local earthquake tomography of the south-western Alps (Géofrance 3D 1996 experiment)

09:30 SUE, C.; THOUVENOT, F.; FRECHET, J.;

SE16-004 TRICART, P.

Present-day stress regime within the inner western Alps

09:45 BUROV, E.B.; PODLADCHIKOV, Y.;

SE16-005 GRANDJEAN, G.; BURG, J.-P.; KISSLING, E.  
Validation of multidisciplinary data using thermo-mechanical numerical modelling: application to the western Alps

10:00 GRANET, M.; ACHAUER, U.; JUDENHERC, S.  
SE16-006 What do we know about the lithosphere beneath France from seismic tomography and seismic anisotropy (Solicited Paper)

10:30 BREAK

Chairperson: Piffner, O.A.

Editor: Ledru, P.

11:00 GRANDJEAN, G.; BITRI, A.; DEBEGLIA, N.;  
SE16-007 GUILLOCHEAU, F.; MENNECHET, C.; BUROV, E.

The million Geofrance 3D project: a scientific platform for studying western European lithosphere

11:15 GUENNOC, P.; BRUN, J.P.; ARMOR GROUP  
SE16-008 Cadomian tectonics in northern Brittany: results from geophysical imagery and 3D modelling at crustal scale

11:30 BOISSONNAT, J.-D.; CALCAGNO, PH.;  
SE16-009 COURRIOUX, G.; GUILLEN, A.; NULLANS, S.; RENAUD, X.; REPUSSEAU, PH.; THIBAUT, M.; TRUFFERT, C.

3D modelling: from cross-section editor to geophysical computing

11:45 BOSCH, M.

SE16-010 Lithologic inversion from plural geophysical data

12:00 LUNCH

Chairperson: Fuchs, K.

Editor: Ledru, P.

14:00 REHAULT, J.P.; GUENNOC, P.; DEVERCHERE, J.; MAUFFRET, A.; BETHOUX, N.; BESLIER, M.O.; CONTRUCCI, I.; ROLLET, N.; CHAMOT-ROOKE, N.; TRUFFERT, C.

SE16-011 Deep and shallow structure of the NW Mediterranean: new insights on the Ligurian Sea and margins (Solicited Paper)

14:30 TRUFFERT, C.; COURRIOUX, G.; CALCAGNO, PH.; THIBAUT, M.; GUENNOC, P.

SE16-012 3D geometric and gravity modelling of the Cadomian orogeny (ARMOR project)

14:45 CAUVIN, C.; GALDEANO, A.; EGAL, E.;

SE16-013 TRUFFERT, C.; POZZI, J.P.

Contribution of sample measurements to magnetic modelling of the French Cadomian belt

15:00 LE BEGAT, S.; GRANDJEAN, G.; WYNS, R.

SE16-014 Shallow crustal imaging of Armorican belt from ARMOR seismic profile

15:15 SOBOLEV, S.V.

SE16-015 3-D mantle temperature and dynamics of the French Massif Central from integrated interpretation of seismic tomography, mantle xenoliths and surface heat flow (Solicited Paper)

15:45 ROIG, J.Y.; MILESI, J.P.; FAURE, M.;

SE16-016 TRUFFERT, C.; MALUSKI, H.; BOUCHOT, V.; GEOFRANCE 3D CARTOGRAPHY AND METALLOGENY TEAM

Geological, geophysical and radiochronological investigations in the French Massif Central. Consequences on the megastructure interpretations

16:00 LE CARLIER DE VESLUD, C.; VIGNERESSE, J.L.; SCHOEFLER, B.; ROIG, J.Y.; ROYER, J.J.; GEOFRANCE 3D TEAM

SE16-017 3D modelling of the Argenton crustal zone (Géofrance 3D Program)

16:15 VIGNERESSE, J.L.; CUNNEY, M.; AMEGLIO, L.  
SE16-018 Multiscale global 3D inversion on granitic plutons in the Massif Central France

16:30 END OF SESSION

SE

## SE16 3-D crustal imaging of France - Poster Session

Convener: Ledru, P.

Co-Convener(s): Fuchs, K.; Galdeano, A.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Ledru, P.

Editor: Ledru, P.

- SE051 **BERTRAND, E.; DESCHAMPS, A.**  
SE16-019 Lithospheric structure beneath the southern French Alps inferred by broad-band analysis
- SE052 **COTTE, N.; PEDERSEN, H.; CAMPILLO, M.**  
SE16-020 Analysis of surface waves in the French Alps by a dense broad-band station array
- SE053 **JUDENHERC, S.; GRANET, M.; ACHAUER, U.; MOCQUET, A.; POUPINET, G.**  
SE16-021 3D imaging of the Hercynian suture in the French "Massif Armoricain"
- SE054 **GALDEANO, A.; ASFIRANE, F.; TRUFFERT, C.; CAUVIN, C.**  
SE16-022 The Aeromagnetic map of Cotentin (NW France)
- SE055 **ASFIRANE, F.; BOUCHOT, V.; VIALLEFOND, L.; FEYBESSE, J.L.; BOURGUIGNON, A.; TRUFFERT, C.**  
SE16-023 A new compilation of the aeromagnetic data of Massif Central, correlation to geological and geochemistry data (Geofrance 3D project)
- SE056 **TRUFFERT, C.; BOUCHOT, V.; VIALLEFOND, L.; CALCAGNO, PH.; COURRIOUX, G.; THIBAUT, M.; ROIG, J.Y.; MILESI, J.P.**  
SE16-024 3D gravity modelling of the south Limousin: insights of the gravity-geochemistry anomaly relationships
- SE057 **MARTELET, G.; DIAMENT, M.; CHARONNAT, X.; FAURE, M.**  
SE16-025 A detailed gravity survey in Cevennes (south-east Massif Central): constraints on the 3-D crustal structure
- SE058 **AMEGLIO, L.; TARDIF, H.; VIGNERESSE, J.L.; LE CARLIER DE VESLUD, C.; GEOFRANCE 3D TEAM**  
SE16-026 3D modelling of the Blond and Veynazes granitic massifs

## SE17 Dynamics of plate boundaries .1 Geodynamics of collision belts: stacking and exhumation processes - Poster Session

Convener: Kilias, A.

Co-Convener(s): Ring, U.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - SE

- SE137 **ELLIS, S.; PFIFFNER, A.; BEAUMONT, C.**  
Geodynamic models of crustal-scale episodic tectonic accretion in subduction zones

- SE138 **SCHUSTER, K.; SPINDLER, S.; ENDERLE, U.; OETTINGER, G.; SCHULZE, A.; PRODEHL, C.; DEKORP RESEARCH GROUP**  
The refraction seismic experiment GRANU95 - results and correlations with reflection profilings
- SE139 **TRANOS, M.D.; KILIAS, A.A.; MOUNTRAKIS, D.M.**  
Geometry and kinematics of the post-metamorphic thrust system in the Circum Rhodope Belt (CRB) at the western margin of the Hellenic Hinterland (Greece)
- SE140 **WAWRZENITZ, N.; KROHE, A.**  
Blisters of hot middle crust in the north Aegean extensional region
- SE141 **GESSNER, K.; LACKMANN, W.; RING, U.; PASSCHIER, C.W.**  
The early-alpine tectonometamorphic history of the Menderes Massif, SW Turkey: implications for the evolution of the eastern Mediterranean
- SE142 **PARPHENUK, O.I.**  
Thermal-mechanical models of evolution of layered lithosphere in collisional belts
- SE143 **CHAMINE, H.I.; FERNANDEZ, F.J.; FONSCA, P.; RIBEIRO, A.**  
Unusual HT quartz c-axis fabric developed in the quartz-mylonites of the Espinho formation (Ossa-Morena zone, NW Portugal)
- SE144 **SOKOLOV, S.D.; GRIGORIEV, V.N.**  
Tectonic juxtaposition of oceanic complexes along the northeastern Asian convergent boundary in the late mesozoic
- SE145 **BONDARENKO, G.YE.; MOROZOV, O.L.; ALEKSUTIN, M.V.; CHAMOV, N.P.; KHUDOLEY, A.K.; LAYER, P.; LUTCHITSKAYA, M.V.; SILANTIEV, S.A.**  
The tectonotype of paleolateral structures series of Jurassic-Neocomian Siberia convergent margin (the Taigonos peninsula, NE of Russia)
- SE146 **GIUNCHI, C.; RICARD, Y.; ALLEMAND, P.; GUILLOT, S.**  
Mountain building and the role of phase transitions
- SE147 **RING, U.**  
Did erosion mainly exhumate the Aegean blueschists?
- SE148 **PETRINI, K.; PODLADCHIKOV, Y.**  
Non-lithostatic pressure during continental shortening

## SE17 Dynamics of plate boundaries .1 Geodynamics of collision belts: stacking and exhumation processes

Convener: Kilias, A.

Co-Convener(s): Ring, U.

Friday, 24 April 1998

Lecture Room: R3

Chairpersons: Ring, U.; Kilias, A.

- 09:00 **RILLER, U.**  
Proterozoic crustal kinematics and exhumation of deep-crustal rocks in the southern superior province

- 09:15 **NEGA, M.; KRUHL, J.H.; KRENTZ, O.; LEONHARDT, D.**  
Nappe stacking and exhumation of high-pressure rocks during continent collision: a Variscan scenario from the western Erzgebirge
- 09:30 **ECHTLER, H.P.; HETZEL, R.**  
Non-extensional paleozoic high-P rock exhumation in the southern Urals
- 09:45 **SANDERS, C.A.E.**  
The life cycle of the east Carpathian orogenic wedge
- 10:00 **PARTZSCH, J.H.; FREY, M.; SCHMID, S.M.**  
The evolution of the Adula nappe (Switzerland): new data and the consequences for the evolution of the Penninic nappe edifice
- 10:15 **BRUNET, C.; MONIE, P.; JOLIVET, L.; CADET, J.-P.**  
Geodynamic evolution of the northern Tyrrhenian Basin from  $^{39}\text{Ar}/^{40}\text{Ar}$  ages on micas along a transect from Corsica to Tuscany
- 10:30 **BREAK**

Chairpersons: Partzsch, J.H., Hetzel, R.

- 11:00 **CELLO, G.; MAZZOLI, S.**  
Syn-collisional exhumation of HP-LT rocks in the Calabria-Lucania borderland area (southern Italy)
- 11:15 **FALALAKIS, G.; KILIAS, A.; MOUNTRAKIS, D.**  
Cretaceous syn-metamorphic deformation of the Sebrimacedonian metamorphic province (N. Greece)
- 11:30 **ELLIS, S.; PFIFFNER, A.; BEAUMONT, C.**  
Geodynamic models of crustal-scale episodic tectonic accretion in subduction zones
- 11:35 **LIPS, A.L.W.; WHITE, S.H.; WIJBRANS, J.R.**  
High pressure metamorphism in the Aegean region: when did it happen and what happened next?
- 11:50 **THOMSON, S.N.; STÖCKHERT, B.; BRIX, M.R.**  
Miocene high-pressure metamorphic rocks of Crete, Greece: rapid exhumation by buoyant escape
- 12:05 **JOHNSON, C.; RING, U.; HETZEL, R.**  
Neogene denudation of the Menderes massif, Turkey
- 12:20 **AVDIS, V.**  
The "stack of nappes" in western Crete
- 12:35 **ZORIN, YU.A.**  
Geodynamics of the western part of Mongolia-Okhotsk collision belt: stacking and exhumation
- 12:50 **END OF SUB-SESSION**

## **SE17 Dynamics of plate boundaries**

### **.2 Active deformation along plate boundaries: measurements and models**

Convener: Calais, E.

Co-Convener(s): Wdowinski, S.

**Monday, 20 April 1998**

Lecture Room: GALLIENI 5

Chairperson: Walpersdorf, A.

- 09:00 **REILINGER, R.; MCCLUSKY, S.; KING, R.; TOKSÖZ, N.; BARKA, A.; DEMIR, C.; VEIS, G.; OUZOUNIS, A.; PRILEPIN, M.; KOTZEV, V.; GEORGIEV, I.; KAHLE, H.; PETER, Y.; SEEGER, H.; TEALAB, A.**  
Velocity field for the eastern Mediterranean

- 09:15 **COHEN, S.C.; FREYMUELLER, J.T.**  
Postseismic and interseismic deformation at the north America-Pacific plate boundary, southcentral Alaska, USA
- 09:30 **KLOTZ, J.; REIGBER, CH.; ANGERMANN, D.; MICHEL, G.; PORTH, R.**  
Subduction-related deformation and long-term compression in the central and southern Andes derived from GPS
- 09:45 **CATTIN, R.; LYON-CAEN, H.; ARMIJO, R.; DE CHABALIER, J.-B.; RUEGG, J.-C.**  
Modelling of the seismic cycle in subduction zones, application to northern Chile
- 10:00 **VILLEMIN, T.; JOUANNE, F.; GPS-TFZ TEAM**  
1995-1997 surface deformation along the Husavik-Flatey transform fault and around its junction with the northern volcanic zone in Iceland
- 10:15 **JOUANNE, F.; MUGNIER, J.L.; GAMOND, J.F.; LE FORT, P.; VIGNY, C.; FRENCH-NEPALESE IDYLHIM TEAM**  
Preliminary results of GPS measurements across western Nepal
- 10:30 **BREAK**

Chairperson: Reilinger, R.E.

- 11:00 **WALPERSDORF, A.; AMBROSIUS, B.A.C.; KAHAR, J.**  
Interpretation of GPS observations in the triple junction area in Indonesia
- 11:15 **WALPERSDORF, A.; STEVENS, C.; AMBROSIUS, B.A.C.; KAHAR, J.**  
Deformation in the Palu-Koro fault region (Sulawesi) observed by GPS
- 11:30 **DIXON, T.; DEMETS, C.; JANSMA, P.; MANN, P.; CALAIS, E.**  
Relative motion between the Caribbean and North American Plates and related plate boundary zone deformation based on a decade of GPS observations
- 11:45 **BASTOS, L.; OSORIO, J.; BAPTISTA, P.; HEIN, G.; FERNANDES, R.**  
Recent crustal dynamics in the Azores Archipelago derived from repeated GPS observations
- 12:00 **KAWAR, R.; BLEWITT, G.; DAVIES, P.; SMITH, A.**  
Studying plate deformation using GIS and GPS technologies
- 12:15 **FRANKE, D.; HINZ, K.**  
The structure of the crust and the upper mantle beneath the Laptev Sea in north-eastern Siberia
- 12:30 **MATOVA, M.**  
Block mosaic and seismic manifestations in Bulgaria
- 12:45 **BETHOUX, N.; CALAIS, E.; OUIILLON, G.; NICOLAS, M.**  
Evaluation of present seismic deformation in the western Alps
- 13:00 **LUNCH**

Chairperson: Chemenda, A.

- 14:00 **WDOWINSKI, S.; BEN-AVRAHAM, Z.**  
Recent seismic activity at the edge of rift propagation in the Gulf of Elat (Aqaba)
- 14:15 **CHANG, C.-P.; HUANG, C.-Y.**  
Evolution of plate boundary in the Taiwan arc-continent collision terrane



- 14:30 KUKOWSKI, N.; LALLEMAND, S.; MALAVIELLE, J.  
Interaction of two active decollements and antiformal stacking in sandbox accretionary wedges
- 14:45 HEIDBACH, O.; DREWES, H.; SOFFEL, H.  
A model of Mediterranean lithospheric deformation with finite elements
- 15:00 SOLHEIM, L.P.; SILVER, P.G.  
A fluid intenter model for the deformation of continental margins: a model for South America
- 15:15 BUROV, E.B.; JAUPART, C.; POLIAKOV, A.  
Surface processes, subsurface heterogeneities and the lithospheric strength in the compressional areas
- 15:30 KUBO, A.; NOGI, Y.  
Present evolution of the Pacific-Australia-Antarctica triple junction based on slip vector deviations
- 15:45 ROYER, J.-Y.; DYMENT, J.  
Integral deformation of the central Indian basin from Eocene plate reconstructions
- 16:00 COUTAND, I.; ROPERCH, P.; CHAUVIN, A.; COBBOLD, P.R.; GAUTIER, P.  
Cretaceous and tertiary clockwise rotations in the Puna plateau (Argentina): tectonic implications for central Andes
- 16:15 ANGELIER, J.; FONT, Y.; HU, J.-C.; LALLEMAND, S.  
Earthquake distribution and mechanisms, lithospheric structure and tectonic regimes: Taiwan
- 16:30 END OF SUB-SESSION
- 17:00 Opening
- 19:30 Reception

**SE17 Dynamics of plate boundaries**  
**.2 Active deformation along plate boundaries: measurements and models - Poster Session**

Convener: Calais, E.  
 Co-Convener(s): Wdowinski, S.  
 Display Time: Monday, 09:00 - Friday, 12:00  
 Authors in Attendance: Tuesday, 17:00 - 19:00  
 Poster Area: RHODES - SE  
 Chairperson: Calais, E.

- SE149 TANG, J.-C.; CHEMENDA, A.; LALLEMAND, S.; HASSANI, R.; CHERY, J.; YANG, R.K.  
Gravity, seismicity and tectonic signature of arc-continent collision: results from physical and numerical modelling
- SE150 PAVLIS, E.C.; MERTIKAS, S.; KARALIOTIS, A.; FRANTZIS, X.; MBARTZOS, E.  
Aegean-African boundary tectonics from CRETE: Crete REgional Tectonic Experiment

---

**Geophysical Journal International**  
**Journal of Geodynamics**  
 and  
**Tectonics**

---

EGS journals for the publication of your contribution

---

**SE17 Dynamics of plate boundaries**  
**.3 Seismological studies in convergent plate margins**

Convener: Kissling, E.  
 Co-Convener(s): Polonia, A.  
 Tuesday, 21 April 1998  
 Lecture Room: R2  
 Chairperson: N.N.

- 08:45 SPALLAROSSA, D.; PAROLAI, S.; CATTANEO, M.; EVA, C.  
Nonlinear inversion of teleseismic P wave travel time residuals in north western Italy
- 09:00 CHRISTOVA, C.  
Stress field distribution in the Tyrhenian region as deduced by inversion of earthquake focal mechanisms
- 09:15 SOBOLEV, S.V.; ONCKEN, O.; ANCORP WORKING GROUP  
ANCORP'96: an image of fluid escape from subduction zone in Andes?
- 09:30 GÜENDEL, F.; QUINTERO, R.  
Seismotectonics of Central America: a study of earthquake focal mechanisms
- 09:45 MASSON, F.; DORBATH, C.; CARLIE, G.; MARTINEZ, C.  
Structure of the crust in Central Andes inferred from Poisson's ratio
- 10:00 LUESCHEN, E.; ANCORP WORKING GROUP  
ANCORP'96 - subduction zone in the central Andes imaged by seismic reflection survey
- 10:15 GIAMPICCOLO, E.; MUSUMECI, C.; MALONE, S.; GRESTA, S.; PRIVITERA, E.  
Seismicity and stress tensor inversion in the central Washington Cascade Mountains (USA)
- 10:30 END OF SUB-SESSION

**SE17 Dynamics of plate boundaries**  
**.3 Seismological studies in convergent plate margins - Poster Session**

Convener: Kissling, E.  
 Co-Convener(s): Polonia, A.  
 Display Time: Monday, 09:00 - Friday, 12:00  
 Authors in Attendance: Tuesday, 17:00 - 19:00  
 Poster Area: RHODES - SE

- SE151 QUINTERO, R.; GÜENDEL, F.  
1D velocity model estimation in Costa Rica, Central America
- SE152 KODAIRA, S.; TAKAHASHI, N.; KINOSHITA, H.; MOCHIZUKI, K.; SHINOHARA, M.  
The Nankai trough seismogenic zone experiment: results of wide-angle OBS data
- SE153 SLANCOVA, A.; SPICAK, A.  
Delimitation of domains with uniform state of stress in the Wadati-Benioff zone beneath Java
- SE154 YEH, Y.T.; YU, T.-T.  
The characteristics of stress field in the Hualien area, eastern Taiwan revealed from earthquake rupture process
- SE155 RIETBROCK, A.; HABERLAND, CH.; GIESE, P.  
Velocity and Q tomography in the central Andes
- \*

## SE19 The Trans European Suture Zone (TESZ) I

Convener: Thybo, H.

Co-Convener(s): Blundell, D.J.; Gee, D.G.; Guterch, A.; Pharaoh, T.C.

**Monday, 20 April 1998**

Lecture Room: HERMES

Co-sponsored by: EUROPROBE

Chairperson: Guterch, A.

08:30 BLUNDELL, D.J.

The legacy of the European geotraverse \*

08:45 PHARAOH, T.

The Trans-European Suture Zone: a tectonic overview

09:00 POLONAISE WORKING GROUP; CZUBA, W.; GACZYNSKI, E.; GRAD, M.; GUTERCH, A.; JANIK, T.; MATERZOK, R.; SRODA, P.; MILDEPIORKO, M.; LUND JENSEN, S.; THYBO, H.; HARDER, S.; KELLER, G.R.; MILLER, K.C.; LUOSTO, U.; YLINIEMI, J.; SCHUSTER, K.; SCHULZE, A.; MOTUZA, G.; NASEDKIN, V.; LUND, C.E.

POLONAISE'97 - international seismic experiment between Precambrian and Variscan Europe in Poland (Solicited Paper)

09:30 KELLER, G.R.

A summary of crustal structure along the Appalachian-Ouachita orogenic belt in North America: a comparison with the TESZ

09:45 MUSACCHIO, G.; MOONEY, W.D.

Composition, structure and evolution of Precambrian crust: evidence from Vp/Vs ratios

10:00 EUROBRIDGE SEISMIC WORKING GROUP

EUROBRIDGE-95: deep seismic profiling within the east European craton

10:15 PAULSEN, H.

NARS: seismic studies of the European mantle using mobile broadband stations

10:30 BREAK

Chairperson: Blundell, D.J.

10:45 ABRAMOVITZ, T.; THYBO, H.; MONA LISA WORKING GROUP

The Baltica-Avalonia Suture in the SE North Sea (Solicited Paper)

11:15 WYBRANIEC, S.; ZHOU, S.; FORSBERG, R.; LEE, M.; DEMIANOV, G.; WONIK, T.; PERCHUC, E.; THYBO, H.; WILLIAMSON, J.P.

European potential field data and their tectonic implications

11:30 GRABOWSKI, J.; NAWROCKI, J.

Remagnetization of Devonian carbonates from the Holy Cross Mts (central Poland)

11:45 ELMING, S.-A.; MIKHAILOVA, N.P.; KRAVCHENKO, S.

Palaeomagnetism of proterozoic rocks from the Ukrainian shield and the consolidation of the east European craton

12:00 AYALA, C.; KIMBELL, G.S.; BROWN, D.; JUHLIN, C.; MENSNIKOV, Y.P.

Magnetic evidence for the geometry of the eastern margin of the East European Craton

12:15 BROWN, D.; NAVAREZ-MARRON, J.; JUHLIN, C.; PEREZ-ESTAUN, A.; PUCHKOV, V.; AYALA, C.; KIMBELL, G.; GOROZHANINA, Y.

Crustal-scale structure of the footwall to the suture zone, southern Urals

12:30 GIESE, U.; KATZUNG, G.; KRAMM, U.

The TransEuropean Suture Zone in NE-Germany - Implications and constraints from structural studies, provenance analysis and isotope dating (Solicited Paper)

13:00 LUNCH

Chairperson: Thybo, H.

14:00 FRANKE, W.; ONCKEN, O.

The Variscan belt in central Europe: geology and geophysics (Solicited Paper)

14:30 LAMARCHE, J.; BERGEAT, F.; MANSY, J.L.; SWIDROWSKA, J.; WIECZOREK, J.

Variscan to alpine paleo-stress evolution in the Teisseyre-Tornquist Zone (southern Poland)

14:45 VEJBAEK, O.V.

Deep structures in Danish sedimentary basins

15:00 KRAWCZYK, C.M.; STILLER, M.; POLOM, U.; BASIN'96 WORKING GROUP

The northern rim of the Central European Basin system - the offshore-onshore survey BASIN'96

15:15 BAYER, U.; BARRIO-ALVERS, L.; BEILECKE, TH.; GÖTZE, H.-J.; KRAWCYK, CH.; ONDRAK, R.; RABEL, W.; SCHECK, M.

Crustal structure of the NE-German basin, inferred from geological and geophysical data and models

15:30 SHANNON, P.M.; JACOB, A.W.B.

Crustal structure onshore and offshore Ireland: development from palaeozoic to recent time (Solicited Paper)

16:00 LANDES, M.; JACOB, A.W.B.; MASSON, F.; PRODEHL, C.; THYBO, H.; VARNET RESEARCH GROUP

VARNET: a geophysical study of the Variscides and Caledonides in SW Ireland

16:15 TTZ WORKING GROUP; GACZYNSKI, E.; GRAD, M.; GUTERCH, A.; JANIK, T.; MATERZOK, R.; SRODA, P.; LUOSTO, U.; KOMMINAHO, K.; YLINIEMI, J.; HOEING, K.; MAKRI, J.; LUND, C.E.

Crustal structure from deep seismic refraction and wide angle reflection experiment in the Teisseyre Tornquist zone in Poland (TTZ profile)

16:30 GUTERCH, A.; GRAD, M.; KELLER, G.R.; THYBO, H.

New international seismic project in the EUROPROBE TESZ/PANCARDI programme

16:45 GUTERCH, A.; GRAD, M.; ANTONOWICZ, L.

Crustal structure from seismic near vertical reflection data in the Polish basin

Stand-by paper

ASTAPENKO, V.V.; INGEROV, A.I.

ROKITANSKY, I.I.

Comparison of geoelectric structure for Belorussian crystalline massive and Ukrainian shield

17:00 END OF PART I

17:00 Opening

19:30 Reception

SE

## SE19 The Trans European Suture Zone (TESZ) II

Convener: Thybo, H.

Co-Convener(s): Blundell, D.J.; Gee, D.G.; Guterch, A.; Pharaoh, T.C.

**Tuesday, 21 April 1998**

Lecture Room: HERMES

Co-sponsored by: EUROPROBE

Chairperson: Pharaoh, T.C.

- 08:30 **MEISSNER, R.**; THYBO, H.; DEKORP RES-GROUP  
Caledonian and older terrane accretion in the south-west Baltic Sea (Solicited Paper)
- 09:00 **OLONAISE WORKING GROUP**; THYBO, H.; JANIK, T.; GACZYNSKI, E.; GRAD, M.; GUTERCH, A.; KELLER, G.R.; MILLER, K.C.; **JENSEN, S.L.**  
A detailed seismic velocity model of the palaeozoic platform in NW Poland
- 09:15 **OLONAISE'97 WORKING GROUP**; CZUBA, W.; GRAD, M.; GUTERCH, A.; **SRODA, P.**; THYBO, H.; KELLER, G.R.; LUOSTO, U.; YLINIEMI, J.; MOTUZA, G.; NASEDKIN, V.; LUND, C.E.  
**OLONAISE'97** - seismic structure of the Precambrian crust of eastern Europe along P3 profile
- 09:30 **OLONAISE'97 WORKING GROUP**; **WILDE-PIORKO, M.**  
Teleseismic and local events recorded during **OLONAISE'97** - data and preliminary interpretation
- 09:45 **TOR WORKING GROUP**; **GREGERSEN, S.**  
Baltic shield edge teleseismic tomography, project TOR
- 10:00 **ARLITT, R.**; KISSLING, E.; ANSORGE, J.  
Effects of 3D crustal structure on teleseismic wavefronts registered at the TOR array
- 10:15 **HOCK, S.**; KORN, M.; **TOR WORKING GROUP**  
Teleseismic P-coda studies along the TOR-profile
- 10:30 **GOSSLER, J.**; **WYLEGALLA, K.**; BOCK, G.; **TOR WORKING GROUP**  
Anisotropy across the TESZ from shear-wave splitting
- 10:45 **END OF SESSION**

## SE19 The Trans European Suture Zone (TESZ) - Poster Session

Convener: Thybo, H.

Co-Convener(s): Blundell, D.J.; Gee, D.G.; Guterch, A.; Pharaoh, T.C.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: RHODES - SE

Co-sponsored by: EUROPROBE

Chairperson: Thybo, H.

- SE059 **WYBRANIEC, S.**; **ZHOU, S.**; FORSBERG, R.; LEE, M.; DEMIANOV, G.; WONIK, T.; PERCHUC, E.; THYBO, H.; WILLIAMSON, J.P.  
European potential field data and their tectonic implications

- SE060 **KRAWCZYK, C.M.**; STILLER, M.; POLOM, U.; **BASIN'96 WORKING GROUP**  
The northern rim of the Central European Basin system - the offshore-onshore survey **BASIN'96**
- SE061 **PHARAOH, T.**; **EUROPROBE TESZ PROJECT PARTICIPANTS**  
The Trans-European Suture Zone (TESZ) project
- SE062 **YEGOROVA, T.P.**; STAROSTENKO, V.I.  
Structure of the lithosphere below the transition zone between western Europe and east-European platform according to 3-D gravity modelling data
- SE063 **MAKARENKO, G.F.**  
The place consistency of the Tornquist zone in geological time
- SE064 **LEMARCHE, J.**; LEWANDOWSKI, M.; MICHALSKI, K.; MANSY, J.L.; SZULCZEWSKI, M.; BERGERAT, F.  
Structural and paleomagnetic dating of tectonic-related fracture fills
- SE065 **RABEL, W.**; BEILECKE, T.; FREHERS, S.; **DEKORP WORKING GROUP "NORTH GERMAN BASIN"**  
**DEKORP** basin 1996: recent results of the seismic wide-angle measurements
- SE066 **MCCANN, T.**; ONDRAK, R.; **KRAWCZYK, C.M.**  
Geological development of the NE German basin
- SE067 **BUDWEG, M.**; BUSCHE, H.; **RABEL, W.**; WOELBERN, I.; **TOR WORKING GROUP**, **DEKORP WORKING GROUP**  
**TOR** - teleseismic investigation of the Trans-European Suture Zone

## SE20 Aspects of the Carpathian-East Alpine-Pannonian geodynamics: the PANCARDI approach

Convener: Tomek, C.

Co-Convener(s): Neubauer, F.

**Thursday, 23 April 1998**

Lecture Room: R1

Chairperson: Neubauer, F.

Editor: Tomek, C.

- 09:00 **MARTON, E.**; TOKARSKI, A.K.; MASTELLA, L.  
SE20-001 Paleomagnetic results from tertiary Podhale flysch, Polish West Carpathians
- 09:15 **MOSAR, J.**; STAMPFLI, G.M.  
SE20-002 Plate tectonics of the Apulia-Carpathian regions
- 09:30 **VOZAR, J.**; **TOMEK, C.**; **VOZAROVA, A.**  
SE20-003 Meliata, Hronic and Fatric orogenies of the west Carpathians revealed by deep reflection seismics in the east Slovakia
- 09:45 **PLASIENKA, D.**; JANAK, M.; LUPTAK, B.;  
SE20-004 **MILOVSKY, R.**; FREY, M.  
Kinematics and metamorphism of a cretaceous core complex: the Veporic unit of the western Carpathians
- 10:00 **PANAOTU, C.**; **PANAOTU, C.E.**; **PICKSKAY, Z.**;  
SE20-005 **ROSU, E.**  
East clockwise rotation in the eastern Pancardi region during middle miocene

- 10:15 ZUCHIEWICZ, W.; TOKARSKI, A.K.;  
SE20-006 RUBINKIEWICZ, J.; LEONOWICZ, P.;  
SZCZESNY, R.; MASTELLA, L.  
New data on structural history of Silesian and  
Magura nappes, outer Carpathians (Poland) inferred  
from analysis of cross-fold joints
- 10:30 BREAK

Chairperson: Tomek, C.  
Editor: Neubauer, F.

- 11:00 NEMCOK, M.; COWARD, M.P.; SERCOMBE,  
SE20-007 W.J.; KLECKER, R.A.  
Structure and contents of the west Carpathian accre-  
tionary wedge: insights from balancing and sandbox  
modelling
- 11:15 TOKARSKI, A.K.; SWIERCZEWSKA, A.  
SE20-008 Structural development of inner part of the Magura  
nappe, outer Carpathians (Poland)
- 11:30 ZEYEN, H.; BIELIK, M.  
SE20-009 Integrated lithospheric modelling in the western  
Carpathians
- 11:45 LANKREIJER, A.  
SE20-010 Tectonic and rheologic evolution of sedimentary  
basins in the Pannonian-Carpathian area
- 12:00 ZOETEMEIJER, R.; VAN WEES, J.D.;  
SE20-011 BUBNIAK, I.; SLACZKA, A.  
3D-flexural modelling of the west- and east  
Carpathian transition zone: problem description and  
preliminary results
- 12:15 HUISMANS, R.; PODLADCHIKOV, Y.;  
SE20-012 CLOETINGH, S.  
Pannonian basin syn- and post-rift evolution: dynam-  
ic modelling of the transition from passive to active  
rifting
- 12:30 KURZ, W.; UNZOG, W.; NEUBAUER, F.  
SE20-013 Structural evolution of alpine eclogites: implications  
for alpine geodynamics
- 12:45 NEUBAUER, F.; GENSER, J.; KURZ, W.; WANG,  
SE20-014 X.  
Exhumation of the Tauern window, eastern Alps
- 13:00 END OF SESSION

## SE20 Aspects of the Carpathian-East Alpine-Pannonian geodynamics: the PANCARDI approach - Poster Session

Convener: Tomek, C.  
Co-Convener(s): Neubauer, F.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Thursday, 17:00 - 19:00  
Poster Area: RHODES - SE  
Editors: Neubauer, F.; Tomek, C.

- SE068 KREJCI, O.; HUBATKA, F.; SVANCARA, J.  
SE20-015 Construction of the structural cross-sections  
through the Carpathian Flysch belt using the  
methods of the frequency analysis of the seismic  
and gravity data
- SE069 BIELIK, M.; SOTAK, J.; SEFARA, J.; BEZAK,  
SE20-016 V.  
Lithosphere structure in the west Carpathian-  
Pannonian-east Carpathian triple junction area  
based on geophysical data

- SE070 JANAK, M.; SPISIAK, J.; PITONAK, P.  
SE20-017 Pre-alpine metamorphism of the western  
Carpathians: the tatric unit
- SE071 HETTEL, S.; MÜLLER, B.; SPERNER, B.  
SE20-018 The stress field of the collision-subduction zone  
in SE-Romania
- SE072 SPISIAK, J.; HOVORKA, D.  
SE20-019 Morb basalts from Maliata-Hallstatt Ocean  
(Meliata unit, inner western Carpathians)
- SE073 MARTIN, M.; LORENZ, F.P.; ONCESCU,  
SE20-020 M.C.; WENZEL, F.  
Joint tomography inversion of the Carpathian arc  
in Romania
- SE074 GRABOWSKI, J.; NEMCOK, M.  
SE20-021 Summary of paleomagnetic and structural data  
from the central West Carpathians of Poland and  
Slovakia: evidence for the late Cretaceous-early  
Tertiary transpression
- SE075 TOKARSKI, A.K.; SWIERCZEWSKA, A.  
SE20-022 Structural development of inner part of the  
Magura nappe, outer Carpathians (Poland)
- SE076 ZUCHIEWICZ, W.  
SE20-023 Neotectonic structures in the outer east  
Carpathians, Poland, in the light of morphometric  
studies
- SE077 NAZAREVYCH, A.V.; NAZAREVYCH, L.YE.  
SE20-024 Mechanics and rheology of the Earth's crust of  
the Transcarpathians according to spatial-tempo-  
ral structure of seismogeoaoustic mode and a  
complex of geophysical data
- SE078 WILLINGSHOFER, E.; CLOETINGH, S.;  
SE20-025 NEUBAUER, F.  
Significance of Gosau basins for the upper  
cretaceous geodynamic history of the Alpine-  
Carpathian belt
- SE079 MAURITSCH, H.J.; SCHOLGER, R.;  
SE20-026 HAUBOLD, H.  
Reconstruction of the geodynamic development  
of the northern Calcareous Alps based on  
paleomagnetism - review and new data
- SE080 UNZOG, W.; KURZ, W.  
SE20-027 Microfabrics and CPO's at different structural  
levels of the eastern central Alps: implications  
for the rheological evolution of a collisional  
orogen

## SE21 Open session on seismology

Convener: Rabbel, W.  
Wednesday, 22 April 1998  
Lecture Room: R2  
Chairpersons: Dost, B.; Bokelmann, G.

- 09:00 NISHIZAWA, O.; SATOH, T.; LEI, X.  
An accurate three-component observation of elastic  
waveform by using a laser Doppler vibrometer: a  
new method of physical modelling to study seismic  
waves in complex media
- 09:15 SLEEMAN, R.; VAN ECK, T.  
Providing single station phase data to a seismic  
warning system
- 09:30 DOST, B.; HAAK, H.  
Induced seismicity in the Netherlands
- 09:45 BOKELMANN, G.  
Monitoring elastic-wave velocity variations in the  
Earth's crust using machine noise

SE

- 10:00 **POHL, M.M.; WENZEL, F.; KIND, R.; PLENEFISCH, T.; KLINGE, K.**  
Investigation of the crustal structure in south-east Germany using receiver functions
- 10:15 **SUETNOVA, E.; BALLING, N.**  
Fluid pressure and seismic reflectivity in the lower crust
- 10:30 **KRASNOVA, M.A.**  
Upper crust anisotropy in Iceland
- 10:45 **KOSLOFF, D.; KOREN, Z.; ZAKHEM, U.**  
Geologically consistent tomographic subsurface structure determination from seismic data
- 11:00 **ANGELIER, J.**  
A new direct inversion of earthquake focal mechanisms to reconstruct the stress tensor
- 11:15 **FINZI-CONTINI, G.**  
Visco-elastic models (Maxwell & Kelvin) to interpret seismic evidences of certain Romagna-Marche Umbria earthquakes by L-transform methods (Italian Apennine)
- 11:30 **KUZNETSOV, V.V.; KHOMUTOV, S.Y.; PLOTKIN, V.V.; GREKHOV, O.E.; PAVLOV, A.F.; FEDOROV, A.N.**  
The acoustic and electromagnetic phenomena in the atmosphere during the vibroseismic sounding
- 11:45 **END OF SESSION**
- 12:00 **Business Meetings**

## **SE21 Open session on seismology - Poster Session**

Convener: Rabbel, W.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: RHODES - SE

Chairperson: van Eck, T.

- SE118 **DOST, B.; VAN ECK, T.; SLEEMAN, R.; EVERS, L.**  
Observations and research facilities for European seismology (ORFEUS)
- SE119 **PATANE, D.; FERRARI, F.**  
A PC-based programme using a multi-algorithm approach to automatic detection and location of local earthquakes
- SE120 **LOMAX, A.; CATTANEO, M.; BETHOUX, N.; DESCHAMPS, A.; COURBOULEX, F.; DEVERCHERE, J.; VIRIEUX, J.**  
Comparison of linear and non-linear earthquake locations for the 1995 Ventimiglia sequence
- SE121 **HERAK, D.; HERAK, M.; KUK, V.; PRELOGOVIC, E.**  
The Ston-Slano (Croatia) earthquake sequence of 1996
- SE122 **JANSKY, J.; KVANSICKA, M.**  
Amplitude weighting of the fresnel volumes of P-waves in the Earth global model
- SE123 **GOLDIN, S.; MITROFANOV, G.; BARYLNIKOV, A.**  
Iterative methods in ray seismic tomography
- SE124 **GAFFET, S.; GLANGEAUD, F.; PISCERCHIA, P.-F.; NARDIN, M.; ROYER, L.; DEVERCHERE, J.**  
Rinalig experiment on T wave measurement in Ligurian Sea

## **SE22 Images of the continental lithosphere by active seismic methods**

Convener: Rabbel, W.

Co-Convener(s): Gallart Muset, J.; Thybo, H.

**Tuesday, 21 April 1998**

Lecture Room: R1

Chairperson: Thybo, H.

- 11:00 **MARSELLA, E.; BIELLA, G.; DE FRANCO, R.; CORSI, A.; GIUNTINI, R.**  
Deep structure from DSS data and tectonic setting of southern Apennines
- 11:15 **GALLART, J.; PULGAR, J.A.; CARBONELL, R.; DIAZ, J.; CORDOBA, D.; DANOBEITIA, J.J.**  
The western ending of the Pyrenees: crustal structure of the Basque-Cantabrian basin
- 11:30 **CONTRUCCI, I.; NERCESSIAN, A.; BETHOUX, N.; MAUFFRET, A.; FERRANDINI, J.**  
Deep structure of the North Tyrrhenian Basin from on land seismic recording and multi-channel seismic profiles
- 11:45 **CONTRUCCI, I.; NERCESSIAN, A.; MAUFFRET, A.; BETHOUX, N.; PASCAL, G.**  
Deep structure of the Ligurian Sea along a Nice-Calvi line from on land seismic recording, multi-channel seismic profiles and expanded spread profiles
- 12:00 **DOS REIS, T.; MAUFFRET, A.; GALLAT, J.; VIDAL, N.; DIAZ, J.**  
Deep structures of the Menorca margin from deep seismic survey
- 12:15 **GALLART, J.; VIDAL, N.; DIAZ, J.; MAUFFRET, A.; DOS REIS, T.**  
Continental crust in the Menorca margin: velocity-depth constraints
- 12:30 **DELLA VEDOVA, B.; PELLIS, G.; PETRONIO, L.; TASSONE, A.; FEBRER, J.; RINALDI, C.; TENAP GROUP**  
Seismic experiment across the northern tip of the Antarctic peninsula (TENAP project)
- 12:45 **ABRAMOVITZ, T.; BROCHER, T.M.; MOONEY, W.D.**  
P- and S-wave velocity structure of the San Andreas fault system in the San Francisco Bay area
- 13:00 **LUNCH**
- Chairpersons: Thybo, H.; Gallart Muset, J.; Rabbel W.
- 14:00 **MUSACCHIO, G.; WHITE, D.J.; ASUDEH, I.**  
The LITHOPROBE western superior transect: a close look at the archaic lithosphere
- 14:15 **STILLER, M.; JÖRN, K.; STEER, D.; DEKORP/URSEIS RESEARCH GROUP**  
URSEIS'95 - new results after thorough reprocessing of the explosion-source reflection-profiling component
- 14:30 **ECHTLER, H.P.; STILLER, M.; URSEIS RESEARCH GROUP**  
Preservation and origin of paleozoic collisional fabrics in the southern Urals - URSEIS'95
- 14:45 **LECERF, D.; ITZIN, M.; WENZEL, F.; CARBONELL, R.; MAKOVSKY, Y.; GALLART, J.; PEREZ-ESTAUN, A.**  
The wide-angle Moho across the southern Urals

- 15:00 **JUHOJUNTTI, N.**; JUHLIN, C.  
Lower crustal reflectivity at the boundary between the Transscandinavian Igneous Belt and the Svecofennian Domain
- 15:15 **KORJA, A.**; HEIKKINEN, P.J.; AARO, S.  
Crustal structure of the Bothnian Sea
- 15:30 **MASSON, F.**; HAUSER, F.; JACOB, A.W.B.; LANDES, M.  
Lithospheric structure across the Iapetus suture zone in Ireland: teleseismic observations along a controlled source profile
- 15:45 **BUSKE, S.**  
3-D prestack migration of the ISO89-3D data set
- 16:00 **RABEL, W.**; BOHLEN, TH.; POHL, M.; SIEGISMUND, S.; WEISS, TH.  
Shear wave anisotropy of laminated lower crust: seismic field data compared with laboratory data
- 16:15 **PERCHUC, E.**; **THYBO, H.**; PAVLENKOVA, N.  
Variation in depth and character of the 400 km discontinuity
- 16:30 **KOVALEVSKY, V.V.**  
The lithosphere tomography using super powerful vibrational sources
- 16:45 **END OF SESSION**

## SE22 Images of the continental lithosphere by active seismic methods - Poster Session

Convener: Rabel, W.  
Co-Convener(s): Gallart Muset, J.; Thybo, H.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: RHODES - SE  
Chairpersons: Rabel, W.; Gallart Muset, J.

- SE081 **STILLER, M.**; JÖRN, K.; STEER, D.; DEKORP/URSEIS RESEARCH GROUP  
URSEIS'95 - new results after thorough reprocessing of the explosion-source reflection-profiling component
- SE082 **DE FRANCO, R.**; BIELLA, G.; CORSI, A.; CAIELLI, G.; MAUFFRET, A.; CONTRUCCI, I.  
Crustal structure of the northern Tyrrhenian from reflection-refraction data
- SE083 **ZITELLINI, N.**; SARTORI, R.; **TORELLI, L.**  
Structure and seismic stratigraphy of the lower Moroccan Atlantic margin off Meseta
- SE084 **HAJNAL, Z.**; NEMETH, B.  
Seismic signature of the lower crust and lithospheric mantle below the Trans-Hudson Orogen, Canada
- SE085 **THYBO, H.**; ZHOU, S.; PERCHUC, E.  
The transition from "cold" to "hot" areas of North America and the location of high seismicity zones
- SE086 **MORDVINOVA, V.V.**; VINNIK, L.P.; KOSAREV, G.L.; ORESKIN, S.I.; TREUSOV, A.V.  
The origin of the Baikal rift: hypotheses and seismic data
- SE087 **HYVÖNEN, T.**; SANINA, I.A.  
Local tomographic study of southern Finland

- SE088 **DOMASCHK, U.**; SCHMIDT, J.; FLÜH, E.R.  
Lithospheric investigation in the south eastern North Sea
- SE089 **ALEKSEEV, A.S.**; GLINSKY, B.M.; KOVALEVSKY, V.V.  
Active vibroseismic methods in modern seismology problems
- SE090 **CHEN, K.-J.**; JENG, Y.  
Investigation on shallow faults by seismic t\* values

## SE23 Seismic anisotropy, scattering and attenuation

Convener: Plomerova, J.  
Co-Convener(s): Bean, C.J.  
**Thursday, 23 April 1998**  
Lecture Room: HERMES  
Chairperson: Plomerova, J.

### Mantle - anisotropy

- 08:30 **FURLONG, K.P.**  
Complex patterns of seismic anisotropy in regions of active tectonics (Solicited Paper)
- 09:00 **RÜMPKER, G.**; SILVER, P.G.  
Interpretation of shear-wave splitting observations in the presence of vertically-varying anisotropy
- 09:15 **PLENEFISCH, T.**; KLINGE, K.; KRUEGER, F.; KIND, R.  
Anisotropy and structure of the upper mantle beneath the transition zone of Saxothuringicum and Moldanubicum
- 09:30 **GAO, S.**; DAVIS, P.M.; LIU, H.; **ZORIN, YU.A.**; LOGACHEV, N.A.  
SKS splitting beneath the Baikal rift zone
- 09:45 **POLET, J.**; KANAMORI, H.  
Anisotropy beneath California: shear wave splitting measurements using a dense broadband array
- 10:00 **BABUSKA, V.**; PLOMEROVA, J.  
Seismic anisotropy and large-scale fabric of mantle lithosphere of Precambrian cratons
- 10:15 **DEBAYLE, E.**; KENNETT, B.L.N.  
Anisotropy in the Australian upper mantle from waveform inversion
- 10:30 **BREAK**

Chairperson: Babuska, V.

### Mantle-anis. tomography, heter., scatt ...

- 11:00 **GRANET, M.**; ACHAUER, U.; SOBOLEV, S.  
Isotropic tomographic inversion and anisotropic mantle: what do we miss? (Solicited Paper)
- 11:30 **JUDENHERC, S.**; GRANET, M.; BOUMBAR, N.  
Anisotropic tomography of lithosphere beneath France using regional arrival times
- 11:45 **CARBONELL, R.**; GALLART, J.; PEREZ-ESTAUN, A.  
Transition between different degrees of heterogeneity beneath the southern Urals
- 12:00 **TITTEMEYER, M.**; WENZEL, F.; RYBERG, T.; FUCHS, K.  
Scales of heterogeneities in the continental crust and upper mantle

- 12:15 IGEL, H.  
Scattering in the Earth's mantle
- 12:30 KOPNICHIEV, YU.F.  
Space-time variations of shear wave attenuation field in lithosphere and asthenosphere of the North Tien Shan
- 12:45 EGORKIN, A.V.  
Body wave attenuation in the crystalline crust and mantle from PNE data
- 13:00 LUNCH

Chairperson: Bean, C.J.

### Crust

- 14:00 HOLLIGER, K.  
Reference models of seismic heterogeneity in the lithosphere: a 1/f-perspective (Solicited Paper)
- 14:30 BIANCO, F.; CASTELLANO, M.; DEL PEZZO, E.  
Seismic anisotropy in Italian volcanic areas
- 14:45 FRENJE, L.; JUHLIN, C.  
Scattering attenuation and properties of random media in 3D finite difference simulations
- 15:00 GUILBERT, J.; POUPINET, X.; ALLEMAND, P.  
French Massif Central: determination and modelisation of P-wave attenuation
- 15:15 PETROSINO, S.; LA ROCCA, M.; SACCOROTTI, G.; BIANCO, F.; CASTELLANO, M.; CARMONA, E.; IBANEZ, J.; DEL PEZZO, E.  
A seismic array on Mt. Vesuvius
- 15:30 BIANCO, F.; CASTELLANO, M.; DEL PEZZO, E.; IBANEZ, J.  
Measurements of intrinsic and scattering attenuation at Mt. Vesuvius
- 15:45 BEAN, C.J.; O'DOHERTY, K.; MCCLOSKEY, J.  
Scattered waves an an imaging tool
- 16:00 JONES, C.; MEREDITH, P.  
An experimental study of elastic wave propagation and permeability anisotropy in crustal rocks
- 16:15 END OF SESSION

### **SE23 Seismic anisotropy, scattering and attenuation - Poster Session**

Convener: Plomerova, J.

Co-Convener(s): Bean, C.J.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Granet, M.

- SE091 MARGHERITI, L.; NOSTRO, C.; LUCENTE, F.P.; AMATO, A.; COCCO, M.  
Teleseismic shear wave splitting versus upper mantle heterogeneity in Italy
- SE092 HERAK, M.; LOKMER, I.  
Anisotropy of the P-wave velocity in the area of central and southern external Dinarides, Croatia
- SE093 OANCEA, V.  
Global distribution of coda-Q factor
- SE094 VALES, D.; FITAS, A.; SENOS, M.L.; RAMALHETE, D.; CARRILHO, F.  
Anelastic attenuation in the north of Portugal
- SE095 CASTELLANO, M.; BIANCO, F.; VILARDO, G.  
Variations of the Vp/Vs ratio at Mt. Vesuvio

- SE096 CHEN, K.-J.; JENG, Y.  
The attenuation structures of body-wave and its tectonic implications in Taiwan area
- SE097 DRENNOV, A.F.  
A comparison of scattering components of seismic wave fields on rocky and loose grounds
- SE098 KALOGERAS, I.S.; BASKOUTAS, I.G.  
Shear wave velocity differences in Aegean region, Greece, as inferred from Rayleigh wave dispersion
- SE099 YING, J.; SINGH, S.  
Anisotropy from genetic waveform inversion of multi-component wide-aperture seismic data
- SE100 MITROFANOV, G.; NEFEDKINA, T.; GIRSHGORN, L.  
Aspects of Proni-transformation applying in seismic data processing
- SE101 MARTYNOV, V.N.; MIKHAILENKO, B.G.  
Some algorithms for calculation of synthetic seismograms in anisotropic media
- SE102 CHICHININA, T.I.; OBOLENTSEVA, I.R.  
Accounting for spatial dispersion in seismic-wave propagation

### **SE24 Seismic rupture processes: confrontation of observations and theory**

Convener: Ihmlé, P.F.

Co-Convener(s): Deschamps, A.

Tuesday, 21 April 1998

Lecture Room: R9

Chairpersons: Ihmlé, P.F.; Deschamps, A.

- 08:30 COURBOULEX, F.; DEICHMANN, N.; GARIEL, J.C.  
Rupture process of the 1996 Epagny-Annecy earthquake (French Alps)
- 08:45 BOUCHON, M.  
Stress and friction on earthquake faults inferred from near-field seismic data
- 09:00 THIO, H.K.  
Seismic moment and energy ratios for earthquakes in southern California
- 09:15 IHMLE, P.F.  
On the interpretation of subevents in teleseismic waveforms: analysis of the deep Bolivia 1994 earthquake
- 09:30 MADARIAGA, R.  
Rupture dynamics in 3D: why is it always complex? (Solicited Paper)
- 10:00 PERROT, J.; YOUNG, R.P.; BAKER, C.  
Earthquake rupture process in complex media using genetic algorithm based waveform inversion
- 10:15 PEYRAT, S.; BUFORN, E.; MADARIAGA, R.; UDIAS, A.  
Seismic source studies of El Salvador earthquakes
- 10:30 COCHARD, A.; IHMLE, P.F.  
Source tomography and frictional properties of large subduction zone earthquakes
- 10:45 TAVERA, H.; BUFORN, E.  
Seismicity and seismotectonics of Peru
- 11:00 END OF SESSION

## SE24 Seismic rupture processes: confrontation of observations and theory - Poster Session

Convener: Ihmlé, P.

Co-Convener(s): Deschamps, A.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

- SE169 **AKSENOV, V.V.**; LOCAICEK, T.  
Moving waves of deformation as a mechanism of seismic rupture process
- SE170 **RYBICKI, K.R.**; YAMASHITA, T.  
Faulting in a vertically inhomogeneous medium - negative stress drop barriers
- SE171 **PERFETTINI, H.**; STEIN, R.S.; SIMPSON, R.W.; COCCO, M.  
Effects of some previous earthquakes on the Loma Prieta rupture
- SE172 **OZEL, N.**; PINAR, A.; MORIYA, T.; KASAHARA, M.  
Source process of the 1993 Kushiro-Oki earthquake
- SE173 **LEBORGNE, S.**; MADARIAGA, R.  
Modelling body waves at intermediate distances (17°-30°) with a Gaussian beam summation method
- SE174 **IVANOV, V.V.**  
Where will be the next great earthquake
- SE175 **PATANE, D.**; GIAMPICCOLO, E.  
Scaling relation between earthquake size and duration of faulting for microearthquakes at Mount Etna Volcano (southern Italy)

### SE24.1 The Umbria-Marche earthquake sequence of 1997: first results

Convener: Ihmlé, P.F.

Co-Convener(s): Amato, A.

Tuesday, 21 April 1998

Lecture Room: R9

Chairpersons: Amato, A.; Ihmlé, P.F.

- 11:00 **GALLI, P.**; BASILI, R.; BOSI, V.; GALDINI, F.; MEGRAOUI, M.; MESSINA, P.; MORO, M.; SPOSATO, A.  
The central Italy earthquake of September-October 1997: geological effects and seismotectonic hypotheses
- 11:20 **VITTORI, E.**; CELLO, G. DEIANA, G.; MANGANO, P.; MAZZOLI, S.; TONDI, E.; FERRELLI, L.; MASCHIO, L.; MICHETTI, A.M.; SERVA, L.; VITTORI, E.  
Geological effects of the September 26, 1997 earthquakes in central Italy
- 11:40 **MORELLI, A.**; OLIVIERI, M.; EKSTRÖM, G.; DZIEWONSKI, A.M.; BOSCHI, E.  
Source properties of the central Italy earthquake sequence of September-October 1997

\* not included in the Book of Abstracts

- 12:00 **AMATO, A.**; AZZARA, R.; BASILI, A.; CHIARABBA, C.; CIMINI, G.B.; COCCO, M.; DI BONA, M.; MARGHERITI, L.; MAZZA, S.; MELE, F.; SELVAGGI, G.; COURBOULEX, F.; DESCHAMPS, A.; GAFFET, S.; BITTARELLI, G.; CHIARALUCE, L.; PICCININI, D.; RIPEPE, M.  
Main shocks and aftershocks of the 1997 Umbria-Marche (Italy) earthquake sequence
- 12:20 **CATTANEO, M.**; DE LUCA, G.; GORINI, A.; MICHELINI, A.; MONACHESI, G.; PONZIANI, F.; XGUMS  
Umbria-Marche earthquake sequence: the contribution of the Umbria, Marche and Abruzzo local seismic networks
- 12:40 **DIETRICH, M.**; GAFFET, S.; CASERTA, A.; BOUCHON, M.; CORNOU, C.; COURBOULEX, F.; CULTERA, G.; GLOT, J.-P.; GUIGUET, R.; MARRA, F.  
A site effect study during the 1997 Umbria-Marche earthquakes I: field investigations

Stand-by paper:

FRANCESCHETTI, G.; SALVI, S.; SANSOSTI, E.; STRAMONDO, S.; TESAURO, M.

Coseismic surface displacement during the Colfiorito (central Italy) earthquake retrieved by SAR interferometry \*

13:00 END OF SESSION

### SE24.1 The Umbria-Marche earthquake sequence of 1997: first results - Poster Session

Convener: Ihmlé, P.F.

Co-Convener(s): Amato, A.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

- SE176 **BERARDI, R.**; ENEL ACCELEROMETRIC NETWORK WORKING GROUP; MARSAN, P.; SSN SEISMIC MONITORING WORKING GROUP; DESCHAMPS, A.; NICE UNIVERSITY RESEARCH GROUP; DI BONA, M.; ING RESEARCH GROUP  
Strong ground motions during the 1997 Umbria-Marche earthquake sequence
- SE177 **ZOLLO, A.**; BONGIOVANNI, G.; HERRERO, A.; MARCUCCI, S.; MILANA, G.  
The 1997 Colfiorito earthquake sequence (central Italy): insights on the mainshock ruptures from near source strong motion records
- SE178 **BOUCHON, M.**; GAFFET, S.; CORNOU, C.; DIETRICH, M.; GLOT, J.-P.; COURBOULEX, F.; CASERTA, A.; CULTRERA, G.; GUIGUET, R.  
Evidence for high vertical accelerations during the 1997 Umbria-Marche (central Italy) earthquakes
- SE179 **SARAO, A.**; ROMANELLI, F.; COSTA, G.; PANZA, G.F.  
Source inversion and macroseismic modelling for the Umbria-Marche main events

SE



- SE180 **CATTANEO, M.; MICHELINI, A.; MILANA, G.; XGUMS,**  
Umbria-Marche earthquake sequence: seismicity and velocity structure to the south of the town of Sellano
- SE181 **CATTANEO, M.; MICHELINI, A.; MILANA, G.; XGUMS**  
Umbria-Marche earthquake sequence: the GNDT-UNIGE/OGS-DINMA and SSN seismic network
- SE182 **DE MARTINI, P.M.; MARCHIONI, A.; VALENSISE, G.**  
Pre-seismic slip on the 26/IX/1997, Umbria-Marche earthquake fault? Unexpected clues from a comparison of seismometric and leveling data
- SE183 **HUNSTAD, I.; ANZIDEI, M.; BALDI, P.; GALVANI, A.; PESCI, A.**  
GPS observations of co-seismic displacement of the Umbria-Marche seismic sequence
- SE184 **NOSTRO, C.; COCCO, M.; EKSTROM, G.**  
Static stress changes and fault interaction during the 1997 Umbria-Marche earthquake sequence
- SE185 **RIPEPE, M.; BITTARELLI, G.; CHIARALUCE, L.; PICCININI, D.; POGGI, P.**  
Origin of the sound produced by the Calforito's earthquakes
- SE186 **CINTI, F.; CUCCI, L.; MARRA, F.; MONTONE, P.**  
Preliminary analysis of the surface effects produced by the Umbrian-Marche seismic sequence and possible seismotectonic implications
- SE187 **GALADINI, F.; GALLI, P.; LESCHIUTTA, I.; MONACHESI, G.; STUCCHI, M.**  
The September-October 1997 Umbria-Marche (central Italy) earthquake sequence in the seismicity and the active tectonics framework of the central Apennine
- SE188 **BONCIO, P.; LAVECCHIA, G.**  
Regional seismotectonic context of the September-October 1997 Colfiorito earthquakes (central Italy)
- SE189 **MEGHRAOUL, M.; BOSI, V.**  
Rupture geometry and structural control of fault fragments during the Colfiorito earthquake sequence of Sept.-Oct. 1997
- SE190 **GAFFET, S.; COURBOULEX, F.; CORNOU, C.; CASERTA, A.; BOUCHON, M.; CULTRERA, G.; DIETRICH, M.; GLOT, J.-P.; GUIGUET, R.; MARRA, F.**  
A site effect study during the 1997 Umbria-Marche (central Italy) earthquakes II: preliminary results
- SE191 **CASERTA, A.; MARRA, F.; ROVELLI, A.**  
Effects of local amplification at two strong-motion stations as inferred from small after-shocks during the Umbria-Marche seismic sequence

---

**Attend the Poster Session**

---

## **SE25 High-resolution seismics: theory, methods and applications**

Convener: Lykke-Andersen, H.  
Co-Convener(s): Brancolini, G.  
**Thursday, 23 April 1998**  
Lecture Room: R3  
Chairperson: Juhlin, C.

- 08:45 **GIBERT, D.; HOLSCHNEIDER, M.; SARACCO, G.; VALERO, H.P.**  
Development and optimization of new methods to deconvolve data of instrumental devices:  $\gamma$  version
- 09:00 **BIRYULINA, M.S.; RYZHIKOV, G.A.**  
Sharp deconvolution with application to suppression of multiples
- 09:15 **GIBERT, D.; SARACCO, G.; VALERO, H.P.**  
Analyzing and filtering of complex wavetrains in borehole with the continuous wavelet transform:  $\gamma$  version
- 09:30 **DEBSKI, W.**  
Optimal grid choice for linear tomography problems
- 09:45 **TOTH, T.; HORVATH, F.; NAGYMAROSY, A.; SIMPKIN, P.; VIDA, R.**  
Application of high-resolution seismics on rivers for neotectonic and river dynamics studies
- 10:00 **VIDA, R.; TOTH, T.; MAGYARI, O.**  
Ultra-high resolution seismis on the lake Balaton, Hungary, processing and interpretation
- 10:15 **CAMERLENGHI, A.; REBESCO, M.; DESANTIS, L.; DOMACK, E.W.; KIRBY, M.E.**  
High resolution seismic stratigraphy of Plamer Deep: a fault bounded late quaternary sediment trap in inner continental shelf, Antarctic Peninsula Pacific margin
- 10:30 **END OF SESSION**

## **SE25 High-resolution seismics: theory, methods and applications - Poster Session**

Convener: Lykke-Andersen, H.  
Co-Convener(s): Brancolini, G.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: RHODES - SE  
Chairperson: Rebesco, M.

- SE125 **HOLSCHNEIDER, M.; SARACCO, G.**  
Generating of directional Bessel beams from sources in a hyperplan: application in geosismic exploration. Submission:  $\gamma$  version
- SE126 **GERMA, P.-H.; PERROUD, H.; ROUSSET, D.; SENECHAL, G.**  
Near surface seismic experiments on an anticlinal flank. Field and numerical data
- SE127 **GIBERT, D.; SARACCO, G.; VALERO, H.P.**  
Development and optimization of a method of seismic endoscopy in borehole imaging:  $\gamma$  version
- SE128 **NORMARK, E.; LYKKE-ANDERSEN, H.; ODEGAARD, J.**  
Screw seismics
- SE129 **JUHLIN, C.**  
Experiences from shallow reflection seismics over granitic rocks in Sweden

- SE130 HUUSE, M.  
high resolution seismic surveying in the eastern  
Danish North Sea
- SE131 LETH, J.O.; HUUSE, M.; NORMARK, E.  
Multi-scale seismic investigations, Danish North  
Sea - illustrated by detailed mapping of the Ruby  
salt diapir

## SE26 3-D seismic modelling and high performance computing

Convener: Seron, F.J.  
Co-Convener(s): Maggio, F.; Sabadell, F.J.  
**Tuesday, 21 April 1998**  
Lecture Room: THALIE  
Chairperson: N.N.

- 14:00 LUZON, F.; SANCHEZ SESMA, F.J.; GIL, A.;  
POSADAS, A.; CANABATE, M.; NAVARRO, M.  
Seismic response of 3D topographical irregularities  
under incoming elastic waves from point sources
- 14:15 JANOD, F.; COUTANT, O.  
3D seismic modelling of a topography using a  
time-domain boundary element method
- 14:30 RODRIGUES, D.  
Large scale 3D modelling of seismic wave propaga-  
tion on a massively parallel machine
- 14:45 SABADELL, J.F.; SERON, F.J.; BADAL, J.  
A multiblock algorithm for parallel wave propaga-  
tion
- 15:00 SERIANI, G.  
3-D spectral element-by-element wave modelling on  
Cray T3E
- 15:15 OPRSAL, I.; PAKZAD, M.; ZAHRADNIK, J.  
Hybrid modelling of ground motions at a sedimenta-  
ry basin
- 15:30 CASADEI, F.; GABELLINI, E.; MAGGIO, F.;  
QUARTERONI, A.  
3D seismic modelling of complex media by the  
mortar method
- 15:45 FISCHER, R.; TROMP, J.  
Pseudospectral methods for global seismology
- 16:00 IGEL, H.  
3-D numerical seismic modelling in global seismo-  
logy
- 16:15 MARTINEZ, M.D.; LANA, X.; BADAL, J.;  
CANAS, J.A.; PUJADES, L.  
Simulated annealing in 3-D seismic modelling:  
elastic structure of the Mediterranean basin from  
Rayleigh wave velocity dispersion data
- 16:30 DCHANDOL, P.; ROUSSET, D.  
Treatment of corner and boundary effects in  
elastodynamic numerical simulation
- 16:45 SERON, F.J.; SABADELL, F.J.; BADAL, J.;  
MARTIN, J.M.  
Modelling techniques for volumetric reconstruction  
of Earth structures
- 17:00 YAO, Z.S.; ROBERTS, R.G.  
A practical regularization in Krylov space for seis-  
mic tomography
- 17:15 END OF SESSION

## SE27 Mechanics of tectonic and volcanic earthquakes (co-sponsored by NP)

Convener: Sileny, J.  
Co-Convener(s): Panza, G.F.  
**Thursday, 23 April 1998**  
Lecture Room: R9  
Chairperson: Panza, G.F.

- 14:00 VAVRYCUK, V.; SILENY, J.  
Focal mechanism determination in anisotropic media:  
numerical study
- 14:15 DUFUMIER, H.; RIVERA, L.  
On the resolution of the isotropic component in  
moment tensor inversions
- 14:30 JECHUMTALOVA, Z.; SILENY, J.  
Error estimate of the mechanism by Monte Carlo  
simulation
- 14:45 PANZA, G.F.; ENGELL-SOERENSEN, L.  
Earthquake moment tensor and source location  
retrieval using three-component waveform data
- 15:00 DAHM, T.; MANTHEI, G.; EISENBLÄTTER, J.  
Automized moment tensor inversion of fluid-induced  
micro-seismicity in salt
- 15:15 PAKZAD, M.; ZAHRADNIK, J.; MELIS, N.  
Low frequency spectral method for focal mecha-  
nisms of weak earthquakes in western Greece
- 15:30 KRAVANJA, S.; SILENY, J.; PANZA, G.F.  
Full moment tensor retrieval in geothermal areas \*
- 15:45 SARAO, A.; PANZA, G.F.  
Robustness of point source moment tensor retrieval  
in the Etna volcanic area
- 16:00 DOMINGUEZ, T.; ZOBIN, V.  
Seismic modelling of explosion earthquakes of Mt.  
Arenal volcano, Costa Rica
- 16:15 ARDELEANU, L.; RADULIAN, M.; SILENY, J.;  
PANZA, G.F.  
Seismic moment tensor of weak crustal earthquakes  
of Vrancea (Romania) retrieved by waveform inver-  
sion
- 16:30 RADULIAN, M.; POPA, M.  
Are the source parameters of the Vrancea (Romania)  
subcrustal earthquakes depth dependent?
- 16:45 GUDMUNDSSON, A.  
Rift-zone and off-rift earthquakes in Iceland
- 17:00 WIEMER, S.; WYSS, M.  
Correlation of anomalously high b-values with  
magmatic activity
- 17:15 END OF SESSION

## SE27 Mechanics of tectonic and volcanic earthquakes (co-sponsored by NP) - Poster Session

Convener: Sileny, J.  
Co-Convener(s): Panza, G.F.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:30 - 19:00**  
Poster Area: RHODES - SE  
Chairperson: Sileny, J.

- SE192 PAKZAD, M.; ZAHRADNIK, J.; MELIS, N.  
Low frequency spectral method for focal mecha-  
nisms of weak earthquakes in western Greece

\* not included in the Book of Abstracts

- SE192A **POPA, M.; RADULIAN, M.**  
Testing of the empirical Green's function deconvolution capability in the special case of Vrancea subcrustal earthquakes
- SE193 **CORREIG, A.M.; URQUIZU, M.; VILA, J.; MANRUBIA, S.C.**  
Aftershock series of event February 18, 1996: an interpretation in terms of self-organized criticality
- SE194 **NAZAREVYCH, L.YE.**  
Geomechanics of the Earth's crust of the transcarpathians and mechanisms of local earthquakes according to macroseismic data

## **SE28 Open session on volcanology, geochemistry and petrology**

Convener: Jakes, P.  
**Tuesday, 21 April 1998**  
Lecture Room: R1  
Chairperson: N.N.

- 08:45 **TRYGGVASON, A.; BENZ, H.M.; RÖGNVALDSSON, S.TH.**  
Seismic travel time tomography studies of two volcanoes, the Long Valley Caldera, California, and the Hengill volcano, Iceland
- 09:00 **BIANCO, F.; CARMONA, X.; CASTELLANO, M.; IBANEZ, J.; LA ROCCA, M.; MARESCA, R.; PETROSINO, S.; SACCOROTTI, G.**  
Wave field analysis of the seismic noise at the Mt. Vesuvius, Italy, applying array techniques
- 09:15 **MÜLLER, M.; HÖRDT, A.; NEUBAUER, F.M.**  
Surveying the Vesuvius by transient electromagnetics
- 09:30 **KONSTANTINOVSKAIA, E.; BRUNEL, M.; MALAVIEILLE, J.**  
The microstructural and geochemical evidences of the slow-spreading rift environments controlling tectonomagmatic evolution of the upper paleozoic peridotite from the Anyemaqen ophiolite suture zone (Tibet)
- 09:45 **PEREPELOV, A.B.**  
Classification of volcanic rock series: an experience from the Kamchatka island-arc system
- 10:00 **SCHARFMAN, V.S.; KOSTINA, R.I.; SOBOLEV, R.N.**  
Facial analysis as a basis for geological mapping ancient volcanic edifice
- 10:15 **PE-PIPER, G.; PIPER, D.J.W.**  
Tectonic significance of Nd, Sr and Pb isotopic composition of Cenozoic magmatism in the Aegean area
- 10:30 END OF SESSION

## **SE29 Continental roots: their petrology, geochemistry and geophysical features**

Convener: Jakes, P.  
Co-Convener(s): Dragoni, M.  
**Friday, 24 April 1998**  
Lecture Room: R10  
Chairperson: N.N.

- 08:45 **PELTIER, W.R.; PARI, G.**  
Subcontinental downwelling: the roots are unstable (Solicited Paper)

- 09:15 **DE SMET, J.H.; VAN DEN BERG, A.P.; VLAAR, N.J.; YUEN, D.A.**  
The development of continental roots: a numerical upper mantle decompression melting model
- 09:30 **JONES, A.G.; FERGUSON, I.J.**  
The absent lower crustal conductor
- 09:45 **CRAMBES, C.; TAIT, S.**  
Melting of thickened continental crust by the passage of basaltic dykes
- 10:00 **BOERNER, D.E.; KURTZ, R.D.; CRAVEN, J.A.; ROSS, G.M.; JONES, F.W.**  
Geophysical evidence of mantle involvement in paleoproterozoic orogenesis
- 10:15 **MILANOVSKY, S.; KABAN, M.; EGORKIN, A.; VELIKIN, S.; SNEGIREV, A.**  
Geological and geophysical peculiarities of the Anabar shield crust like an example of exposed lower continental crust
- 10:30 **ARTEMIEVA, I.**  
Subcrustal temperatures in Precambrian cratons: a comparative study
- 10:45 END OF SESSION

## **SE31 Mechanics and thermalfluid-dynamics of volcanic processes: modelling, observations and laboratory experiments (co-sponsored by NP)**

Convener: de Natale, G.  
Co-Convener(s): Allard, P.; Bonafede, M.  
**Monday, 20 April 1998**  
Lecture Room: ATHENA  
Co-sponsored by: Microgravity Advanced Research and Support Centre, Naples, Italy  
Chairperson: Bonafede, M.

- 08:30 **GUDMUNDSSON, A.**  
Effects of stress fields on the intrusion and extrusion frequencies of central volcanoes
- 08:45 **JENTZSCH, G.; KRONER, C.; HAASE, O.; WINTER, U.**  
Mayon volcano; Philippines: modelization of stress balance
- 09:00 **CAYOL, V.; DIETERICH, J.; OKUBO, P.**  
Use of earthquakes and deformations as remote stress-meters
- 09:15 **BARBERI, G.; COCINA, O.; NERI, G.; PRIVITERA, E.; SPAMPINATO, S.**  
Space-time patterns of seismicity and stress-strain parameters at Mt. Etna, Sicily: volcanic and tectonic implications
- 09:30 **BRIMICH, L.**  
Thermo-viscoelastic models of the deformations and gravity changes due to the magmatic bodies of prismatic shape
- 09:45 **BONAFEDE, M.; MAZZANTI, M.**  
Modelling gravity variations consistent with ground deformation in the Campi Flegrei Caldera (Italy)
- 10:00 **OBRIZZO, F.; PINGUE, F.; TROISE, C.; DE NATALE, G.**  
Coseismic displacements and creeping along the Pernicana Fault (Etna, Italy) in the last seventeen years: a detailed study of a tectonic structure on a volcano

10:15 **CHIARABBA, C.**; AMATO, A.; DELANEY, P.T.  
Crustal structure and unrest episodes at the Alban Hills volcano, central Italy

10:30 BREAK

Chairperson: Kilburn, C.

11:00 **GAETA, F.S.**; TROISE, C.; DE NATALE, G.; MASTROLORENZO, G.; PINGUE, F.; PELUSO, F.; CASTAGNOLO, D.; MITA, D.G.

A mechanical-thermofluid-dynamical model for Campi Flegrei unrest episodes: possible evolution towards critical phenomena (Solicited Paper)

11:30 **NATALE, G.**; SALUSTI, E.; TROISI, A.

Rock deformation and fracturing processes due to nonlinear shock waves propagating in hyperthermal fluid-saturated domains

11:45 **MACEDONIO, G.**; **LONGO, A.**; CIATTI, E.

Numerical modelling of magma withdrawal from compositionally stratified magma chambers

12:00 **DAHM, T.**

An empirical green function approach to study the rupture of fluid-induced micro-earthquakes

12:15 **HELLWEG, M.**

Physical source models for harmonic tremor

12:30 **SCARPA, R.**; MARTINI, M.; SACCOROTTI, G.; DE LUCA, G.; CHOUET, B.; DAWSON, P.; FILIPPI, L.; ZAMBONELLI, E.; MILANA, G.; MARCUCCI, S.; CATTANEO, M.

Preliminary results from a broadband seismic experiment at Stromboli Volcano, Italy

12:45 **TRIGILA, R.**; PALLADINO, D.M.; TADDEUCCI, J.; SCARLATO, P.

A new pressure vessel for magma- and rock-H<sub>2</sub>O interaction studies

13:00 LUNCH

Chairperson: de Natale, G.

14:00 **KILBURN, C.R.J.**; VOIGHT, B.

Slow rock fracture as an eruption precursor at Soufriere Hills Volcano, Montserrat (Solicited Paper)

14:30 **PAPALE, P.**

Numerical modelling of magma ascent along volcanic conduits

14:45 **NERI, A.**; MACEDONIO, G.; GIDASPOW, D.

Multiphase flow modelling and simulation of explosive volcanic processes

15:00 **TALLARICO, A.**; DRAGONI, M.

Viscous flow in a channel: application to lava flows

15:15 **ACOCCELLA, V.**; FUNICIELLO, R.; SALVINI, F.

Transfer structures and volcanic activity along the Tyrrhenian margin of central Italy

15:30 **TEDESCO, D.**; NAGAO, K.

Seismic activity at the Solfarata crater (Campi Flegrei caldera) shows different sources mixing of fumarolic fluids and possible parameters to forecast the occurrence of new earthquakes

15:45 **DE GORI, P.**; AZZARA, R.; BERTRAND, E.; CAPUANO, P.; CHARABBA, C.; CIACCIO, M.G.; CIMINI, G.B.; DE NATALE, G.; DESCHAMPS, A.; GODANO, C.; TAYLOR, J.; TROISE, C.

The BROADVES seismic experiment: first results on the lithospheric structure beneath the Campanian region around the Vesuvius volcano (Poster)

15:50 TROISE, C.

Stress changes associated with volcanic sources: an example from Kilauea rift eruptions (Poster)

15:55 **AVINO, R.**; **BERRINO, G.**; CAPALDI, G.; PECE, R.

Temporal variations in groundwaters radon content and geophysical activity in Campi Flegrei (southern Italy) (Poster)

16:00 **MASTROLORENZO, G.**; D'ALESSIO, G.

Comparative study of pyroclastic deposits in Campi Flegrei (southern Italy): evidences of recurrent eruptive and depositional mechanisms (Poster)

16:05 **JABOCS, F.**; **FRIEDEL, S.**

Large scale resistivity imaging at Merapi volcano (Poster)

16:10 Concluding Remarks

16:30 END OF SESSION

17:00 Opening

19:30 Reception

### **SE31 Mechanics and thermofluid-dynamics of volcanic processes: modelling, observations and laboratory experiments (co-sponsored by NP) - Poster Session**

Convener: de Natale, G.

Co-Convener(s): Allard, P.; Bonafede, M.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: RHODES - SE

Co-sponsored by: Microgravity Advanced Research and Support Centre, Naples, Italy

Chairperson: Allard, P.

SE195 **DE GORI, P.**; AZZARA, R.; BERTRAND, E.; CAPUANO, P.; CHARABBA, C.; CIACCIO, M.G.; CIMINI, G.B.; DE NATALE, G.; DESCHAMPS, A.; GODANO, C.; TAYLOR, J.; TROISE, C.

The BROADVES seismic experiment: first results on the lithospheric structure beneath the Campanian region around the Vesuvius volcano

TROISE, C.

Stress changes associated with volcanic sources: an example from Kilauea rift eruptions

SE197 **AVINO, R.**; **BERRINO, G.**; CAPALDI, G.; PECE, R.

Temporal variations in groundwaters radon content and geophysical activity in Campi Flegrei (southern Italy)

SE198 **MASTROLORENZO, G.**; D'ALESSIO, G.

Comparative study of pyroclastic deposits in Campi Flegrei (southern Italy): evidences of recurrent eruptive and depositional mechanisms

SE199 **JABOCS, F.**; **FRIEDEL, S.**

Large scale resistivity imaging at Merapi volcano

---

### **Attend the Business Meeting of your Section**

on Wednesday, 22 April, 12.00-14.00, Lecture Room R10

---

SE

## SE32 Crustal melting in nature and experiment

Convener: Kotkova, J.

Co-Convener(s): Patino-Douce, A.

Wednesday, 22 April 1998

Lecture Room: R2

Chairpersons: Kotkova, J.; Nabelek, P.

Editors: Kotkova, J.; Brown, M.

14:00 SAWYER, W.

SE32-001 Criteria for the recognition of partial melting (Solicited Paper)

14:30 BRAUN, I.

SE32-002 Generation of leucogranites in the Kerala khondalite belt, southern India

14:45 HURAI, V.; JANAK, M.; LUDHOVA, L.

SE32-003 Partial melting and retrogression during exhumation of the high-grade metapelites, the Tatra Mts., western Carpathians

15:00 NABELEK, P.; BARTLETT, C.; M. GLASCOCK

SE32-004 Can compositions of leucosomes in migmatites be used as model for compositions of granites?

15:15 KOTKOVA, J.; HARLEY, S.L.

SE32-005 Formation and evolution of HP leucogranulites: experimental constraints and unresolved issues

15:30 BROWN, M.; PRESSLEY, R.A.

SE32-006 Crustal melting in nature: prosecuting source processes (Solicited Paper)

16:00 DICKSON, F.W.; HSU, K.J.

SE32-007 Limitations in applying equilibrium studies to open plutons in crustal gradients

16:15 ESCUDER-VIRUETE, J.

SE32-008 Two-stage syn-extension leucogranitic magmatism in the Tormes gneiss dome, NW Iberian Massif, Spain

16:30 PEREIRA, D.; SHAW, D.M.

SE32-009 Relationship between geodynamics and generation of melt in central Spain

16:45 DOLEJS, D.

SE32-010 Two stage melting around mafic reservoirs: an evidence from the Proterozoic of Bohemian Massif

17:00 END OF SESSION

## SE33 Pre-eruptive processes I

Convener: Marti, J.

Co-Convener(s): Carroll, M.R.; Fulignati, P.;

Gudmundsson, A.

Thursday, 23 April 1998

Lecture Room: ATHENA

Chairperson: Gudmundsson, A.

14:00 DE NATALE, G.; GAETA, F.S.; TROISE, C.; PETRAZZUOLI, S.M.; CASTAGNOLO, D.; PINGUE, F.; PELUSO, F.; TRIGILA, R.

Mechanical versus thermofluid-dynamical effects in the generation of Caldera unrests: examples from Campi Flegrei (Italy) and Rabaul (New Guinea)

14:15 MARTI, J.; GUDMUNDSSON, A.

Overlapping collapse calderas

14:30 MARTI, J.; TURON, F.

Field, experimental and numerical comparison between Andean type and ocean-island collapse calderas

14:45 BEAUDUCCEL, F.; CORNET, F.H.

Constraints from displacements and tilt data on the magma chamber at Merapi (Java)

15:00 FERNANDEZ, J.; TIAMPO, K.; RUNDLE, J.B.; YU, T.-T.; ALONSO-MEDINA, A.; CARRASCO, J.M.

Modelling deformation, potential and gravity changes caused by a magmatic intrusion

15:15 TIAMPO, K.F.; RUNDLE, J.B.; FERNANDEZ, J.M.; LANGBEIN, J.

Ellipsoidal vs. spherical models for magmatic intrusion sources

15:30 FERNANDEZ, J.; FOLCH, A.; RUNDLE, J.B.; MARTI, J.

Ground deformation in a viscoelastic multi-layered system. A comparison between analytical and numerical solutions for point and extended sources

15:45 MARTI, J.; SORIANO, C.; TURON, E.; VIRAMONTE, J.G.

Collapse calderas developed on strike-slip faults

16:00 ANNEN, C.; LENAT, J.-F.; PROVOST, A.

Modelling of dike intrusions and volcano growth

16:15 MULARGIA, F.; BONAZZA, D.; GONZATO, G.; CICCOTTI, M.

Laboratory measurement of the elastic and fracture properties of lavas

16:30 JENTZSCH, G.; JAHR, TH.; WEISE, A.; SCHREIBER, U.; SEEGER, G.; VÖLKSEN, C.; PUNONGBAYAN, R.S.

Mayon volcano; Philippines: mass movements after the eruption of 1993 detected by microgravity and GPS measurements

16:45 RESTA, F.; MARTI, J.; TURON, E.

Phonolitic dikes at the Las Canadas Caldera (Tenerife, Canary Islands): constraints on the geometry and location of shallow magma chambers

17:00 GUDMUNDSSON, A.; LARSEN, G.

Large explosive eruptions in Icelandic central volcanoes

17:15 END OF PART I

## SE33 Pre-eruptive processes - Poster Session

Convener: Marti, J.

Co-Convener(s): Carroll, M.R.; Fulignati, P.;

Gudmundsson, A.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:30 - 19:00

Poster Area: RHODES - SE

SE201 MARIANELLI, P.; METRICH, N.; SBRANA, A.

A melt inclusion study of volatiles during the 1994 lava fountaining activity at Vesuvius

SE202 BICHLER, M.; SORTINO, F.

Evolution of trace elements in fumarolic gases at Vulcano Island (Italy)

SE203 BOLOGNESI, L.

Earthquake-induced changes in the isotopic composition of the water in the geothermal reservoir at Vulcano Island, Italy

## SE33 Pre-eruptive processes II

Convener: Marti, J.

Co-Convener(s): Carroll, M.R.; Fulignati, P.; Gudmundsson, A.

Friday, 24 April 1998

Lecture Room: ATHENA

Chairperson: Bonafede, M.

- 08:30 **LARSEN, G.**; GUDMUNDSSON, A.  
Geometry, morphology and formation of Holocene crater rows in Iceland
- 08:45 **DYER, N.**; KENT, R.; WILSON, L.  
Controlling influences in the lateral propagation of dikes and the position of fissure eruptions
- 09:00 **KENT, R.**; DYER, N.; WILSON, L.  
Modelling the flow of magma in dikes using numerical methods
- 09:15 **CENNI, N.**; BONAFEDE, M.  
A porous flow model of magma migration within Mt. Etna: the influence of extended sources and permeability anisotropy
- 09:30 **MENAND, T.**; TAIT, S.  
Magma transport in dike swarms
- 09:45 **BONAFEDE, M.**; RIYALTA, E.  
Tensile cracks in layered media
- 10:00 **MARINONI, L.B.**; GUDMUNDSSON, A.  
Dyke emplacement in shield-stage formations of Tenerife
- 10:15 **MATTIOLI, G.S.**; DIXON, T.H.; FARINA, F.; HOWELL, E.S.; JANSMA, P.; SMITH, A.L.  
Magma chamber evolution inferred from GPS geodesy of Soufriere Hills volcano, Montserrat
- 10:30 BREAK

Chairperson: Carroll, M.R.

- 11:00 **STRECK, M.J.**; DILLES, J.H.  
Sulfur content of apatite tracking magma degassing evidence from the Yerington Porphyry Copper Batholith, Nevada
- 11:15 **VAN CALSTEREN, P.**; BLACK, S.; VAN WYK DE VRIES, B.; HAWKESWORTH, C.J.  
Constraints on the timescale from nucleation to emanation of volcanic gases
- 11:30 **NUCCIO, P.M.**; PAONITA, A.; SORTINO, F.  
Composition changes of volcanic gas and computation of magma ascent
- 11:45 **HAWKESWORTH, C.J.**; THOMAS, L.; TURNER, S.P.; ZELLMER, G.; VAN CALSTEREN, P.  
The timescales of melt generation and differentiation: evidence from U-series isotopes
- 12:00 **FOLCH, A.**; MARTI, J.; CODINA, R.  
A numerical model for temporal variations during explosive central-vent eruptions
- 12:15 **GAUTHIER, P.-J.**; CONDOMINES, M.  
Radon loss from magmas: degassing mechanisms and consequences on  $^{226}\text{Ra}$ - $^{210}\text{Pb}$  disequilibria in lavas
- 12:30 **GAUTHIER, P.-J.**; LE CLOAREC, M.-F.; CONDOMINES, M.; PENNISI, M.  
Radionuclide constraints on shallow degassing processes at Stromboli volcano
- 12:45 **ROUSE, P.J.**; CARROLL, M.R.  
Phase equilibria of Na-rich phonolites from Montana Blanca, Tenerife
- 13:00 LUNCH

Chairperson: van Calsteren, P.

- 14:00 **GARDNER, J.E.**; HILTON, M.; CARROLL, M.R.  
Magma ascent rate and melt-vapor equilibrium in rhyolitic melts
- 14:15 **MOURTADA-BONNEFOI, C.C.**; LAPORTE, D.  
"Easy" homogeneous bubble nucleation in hydrous rhyolitic melts
- 14:30 **FOLCH, A.**; MARTI, J.  
Overpressure in replenished felsic magma chambers
- 14:45 **STAUDACHER, TH.**; SEIDEL, J.L.; RICARD, L.P.; CHEMINEE, J.L.  
Radon network at Piton de la Fournaise, Reunion Island: seismic crises anticipated by  $^{222}\text{Rn}$  pulses
- 15:00 **SIGNORELLI, S.**; FRANCALANCI, L.; MANETTI, P.; VAGGELLI, G.; CAPACCIONI, B.; ROMANO, C.  
Pre-eruptive volatile ( $\text{H}_2\text{O}$ , F, Cl and S) contents of phonolitic magmas feeding the 3600 years-old Avellino eruption from Vesuvius, southern Italy
- 15:15 **SIGNORELLI, S.**; FRANCALANCI, L.; MANETTI, P.; VAGGELLI, G.; CAPACCIONI, B.  
Determination of  $\text{H}_2\text{O}$ , F, Cl and S in volcanic glasses from the A.D. 79 Vesuvius eruption, southern Italy
- 15:30 BREAK

Chairperson: Marti, J.

- 16:00 **CIONI, R.**  
Pre-eruption volatiles in AD 79 magma chamber of Vesuvius (Italy)
- 16:15 **DI LIBERTO, V.**; NUCCIO, P.M.; PAONITA, A.; SORTINO, F.  
Variations of fumarolic gases composition at Vulcano Island (Italy) related to hydrothermal system evolution
- 16:30 **FULIGNATI, P.**; GIONCADA, A.; SBRANA, A.  
Rare Earth elements behaviour in the alteration facies of an active high-sulfidation hydrothermal system (Vulcano, Aeolian Islands, Italy)
- 16:45 **CIONI, R.**; MARIANELLI, P.; SANTACROCE, R.  
An empirical thermometer for Vesuvius magmas
- 17:00 **ORSI, G.**; PETRAZZUOLI, S.M.; WOHLLETZ, K.  
The interplay of mechanical and thermo-fluid dynamical systems during unrest episodes in Calderas: the Campi Flegrei Caldera (Italy) case
- 17:15 **FRANCALANI, L.**; TOMMASINI, S.; CONTICELLI, S.; DAVIES, G.R.  
Magma chamber dynamics in the XX Century at Stromboli Volcano, Italy: contributions from mineralogical, chemical and isotope data
- 17:30 **ARMIENTI, P.**; SIMAKIN, A.G.; EPELBAUM, M.B.  
Experimental degassing of silicatic melts in continuous pressure drop with coupled crystallization \*
- 17:45 END OF SESSION

---

---

Attend the Poster Session

---

---

SE

**SE34 Rockmagnetism, palaeomagnetism and environmental magnetism**  
**.1 New challenges in rockmagnetism, palaeomagnetism and environmental magnetism**

Convener: Hoffmann, V.  
 Co-Convener(s): Petrovsky, E.  
**Tuesday, 21 April 1998**  
 Lecture Room: R4  
 Chairperson: N.N.  
 Editor: Hoffmann, V.

Environmental magnetism

- 14:05 **PETERS, C.; TURNER, G.**  
 SE34.1- Lake Paringa: a catchment study using magnetic  
 002 techniques (Poster)  
 14:10 **RUMPLER, D.; BROSS, C.; KÖSSLER, P.;**  
 SE34.1- **APPEL, E.; BIBUS, E.**  
 003 The paleoclimatic significance of rock magnetic  
 profiles from loess-soil deposits in SW Germany  
 (Poster)

14:15 Change over

Rockmagnetism

- 14:30 **DUNLOP, D.J.; ÖZDEMİR, Ö.; SCHMIDT, P.W.;**  
 SE34.1- **CLARK, D.A.**  
 005 Time-temperature relations for pyrrhotite and magnetite: use in reconstructing burial and uplift histories (Poster)  
 14:35 **HROUDA, F.; JEZEK, J.; SAIC, S.**  
 SE34.1- Theoretical models of magnetic anisotropy to strain  
 006 considering triaxial magnetic particles (Poster)  
 14:40 **IBRAGIMOV, S.Z.; YASONOV, P.G.**  
 SE34.1- The study of composition and size of disintegration  
 007 structures of titanomagnetite using thermomagnetic analysis (Poster)  
 14:45 **IVAKHNENKO, A.P.; SUKHORADA, A.V.**  
 SE34.1- New data about petromagnetic criterions  
 008 gold-bearing crustal basement (Poster)  
 14:50 **KUBLER, L.**  
 SE34.1- The magnetic signature of pyrrhotite bearing  
 009 metasedimentary rocks (Poster)  
 14:55 **MATHE, P.-E.; HENOCQUE, O.; VANDAMME, D.;**  
 SE34.1- **ROCHETTE, P.; MAKAYA, M.**  
 010 Magnetic characterization of manganese oxides from the Tambao lateritic ore deposit (Burkina-Faso) (Poster)  
 15:00 **MATTSSON, H.; ELMING, S.-A.**  
 SE34.1- A rock magnetic study of a regional deformation  
 011 zone in the Fennoscandian shield (Poster)  
 15:05 **MÖRNER, N.-A.**  
 SE34.1- Increased NRM intensity due to seismic vibration  
 012 (Poster)  
 15:10 **ÖZDEMİR, Ö.; DUNLOP, D.J.**  
 SE34.1- Origin of coercivity in multidomain magnetite  
 013 (Poster)  
 15:15 **PETROVSKY, E.; KAPICKA, A.; JORDANOVA, N.;**  
 SE34.1- **GEORGEAUD, V.; ROCHETTE, P.**  
 014 Effect of maximum applied magnetic field on the shape of hysteresis loops (Poster)

- 15:20 **THOMPSON, R.; HARRISON, A.; DERRICK, S.**  
 SE34.1- Unusual low-temperature hysteresis and  
 015 thermomagnetic behaviour of basalts from Tenerife (Poster)  
 15:25 **URBAT, M.; DEKKERS, M.J.**  
 SE34.1- Peru basin sediments: clues as to alterations to the  
 016 NRM (Poster)

15:30 Change over

Palaeomagnetism

- 15:40 **BORRADAILE, G.J.; WERNER, T.; LAGROIX, F.**  
 SE34.1- Anisotropy-controlled thrusting of archaean lower  
 017 crustal rocks: a rock magnetic study at Kapuskasing, Canada (Poster)  
 15:45 **EDEL, J.B.; HUMBERT, C.; HONNOREZ, J.**  
 SE34.1- Asynchronous magnetic overprints in the Visean  
 018 basin of the southern Vosges (France) as a tracer of the APWP of Variscan Europe from Visean up to Jurassic (Poster)  
 15:50 **GOGUITCHAICHVILI, A.; PREVOT, M.;**  
 SE34.1- **DAUTRIA, J.M.**  
 019 Anomalous variations of geomagnetic paleointensity within a single pliocene icelandic hyaloclastic lava flow (Poster)  
 15:55 **HILL, M.J.; YANG, S.; SHAW, J.; WALTON, D.**  
 SE34.1- Palaeointensity results using microwave  
 020 demagnetisation/remagnetisation (Poster)  
 16:00 **LEWANDOWSKI, M.; ABRAHAMSEN, N.**  
 SE34.1- Cambro-ordovician palaeomagnetic results from  
 021 Bornholm (Denmark), and implications for the drift and rotation of Baltica (Poster)  
 16:05 **SCHILL, E.; APPEL, E.; GAUTAM, P.; SINGH, V.K.**  
 SE34.1- Metacarbonates from the lesser Himalaya: do they  
 022 have potential for palaeomagnetic studies? (Poster)  
 16:10 **WERNER, T.**  
 SE34.1- Kinematic relations between magnetic (AMS,  
 023 AARM) and tectonic fabrics for the Niemcza fault zone, Sudetes foreland, SW Poland (Poster)  
 16:15 **RESHETNYAK, M.**  
 SE34.1- Temporal spectra of SV (Poster)  
 024  
 16:20 Concluding Remarks  
 16:30 END OF SUB-SESSION

**SE34 Rockmagnetism, palaeomagnetism and environmental magnetism**  
**.1 New challenges in rockmagnetism, palaeomagnetism and environmental magnetism - Poster Session**

Convener: Hoffmann, V.  
 Co-Convener(s): Petrovsky, E.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
 Poster Area: RHODES - SE  
 Chairperson: N.N.  
 Editor: Hoffmann, V.

- SE206 **PETERS, C.; TURNER, G.**  
 SE34.1-002 Lake Paringa: a catchment study using magnetic techniques

- SE207 RUMPLER, D.; BROSS, C.; KÖSSLER, P.;  
SE34.1-003 APPEL, E.; BIBUS, E.  
The paleoclimatic significance of rock magnetic profiles from loess-soil deposits in SW Germany
- SE209 DUNLOP, D.J.; ÖZDEMİR, Ö.; SCHMIDT, P.W.; CLARK, D.A.  
SE34.1-005 Time-temperature relations for pyrrhotite and magnetite: use in reconstructing burial and uplift histories
- SE210 HROUDA, F.; JEZEK, J.; SAIC, S.  
SE34.1-006 Theoretical models of magnetic anisotropy to strain considering triaxial magnetic particles
- SE211 IBRAGIMOV, S.Z.; YASONOV, P.G.  
SE34.1-007 The study of composition and size of disintegration structures of titanomagnetite using thermomagnetic analysis
- SE212 IVAKHNENKO, A.P.; SUKHORADA, A.V.  
SE34.1-008 New data about petromagnetic criterions gold-bearing crustal basement
- SE213 KUBLER, L.  
SE34.1-009 The magnetic signature of pyrrhotite bearing metasedimentary rocks
- SE214 MATHE, P.-E.; HENOCQUE, O.;  
SE34.1-010 VANDAMME, D.; ROCHETTE, P.; MAKAYA, M.  
Magnetic characterization of manganese oxides from the Tambao lateritic ore deposit (Burkina-Faso)
- SE215 MATTSSON, H.; ELMING, S.-A.  
SE34.1-011 A rock magnetic study of a regional deformation zone in the Fennoscandian shield
- SE216 MÖRNER, N.-A.  
SE34.1-012 Increased NRM intensity due to seismic vibration
- SE217 ÖZDEMİR, Ö.; DUNLOP, D.J.  
SE34.1-013 Origin of coercivity in multidomain magnetite
- SE218 PETROVSKY, E.; KAPICKA, A.;  
SE34.1-014 JORDANOVA, N.; GEORGEAUD, V.; ROCHETTE, P.  
Effect of maximum applied magnetic field on the shape of hysteresis loops
- SE219 THOMPSON, R.; HARRISON, A.; DERRICK, S.  
SE34.1-015 Unusual low-temperature hysteresis and thermomagnetic behaviour of basalts from Tenerife
- SE220 URBAT, M.; DEKKERS, M.J.  
SE34.1-016 Peru basin sediments: clues as to alterations to the NRM
- SE221 BORRADAILE, G.J.; WERNER, T.;  
SE34.1-017 LAGROIX, F.  
Anisotropy-controlled thrusting of archaic lower crustal rocks: a rock magnetic study at Kapuskasing, Canada
- SE222 EDEL, J.B.; HUMBERT, C.; HONNOREZ, J.  
SE34.1-018 Asynchronous magnetic overprints in the Visean basin of the southern Vosges (France) as a tracer of the APWP of Variscan Europe from Visean up to Jurassic
- SE223 GOGUTCHAICHVILI, A.; PREVOT, M.;  
SE34.1-019 DAUTRIA, J.M.  
Anomalous variations of geomagnetic paleointensity within a single pliocene Icelandic hyaloclastic lava flow
- SE224 HILL, M.J.; YANG, S.; SHAW, J.; WALTON, D.  
SE34.1-020 Palaeointensity results using microwave demagnetisation/remagnetisation
- SE225 LEWANDOWSKI, M.; ABRAHAMSEN, N.  
SE34.1-021 Cambro-ordovician palaeomagnetic results from Bornholm (Denmark), and implications for the drift and rotation of Baltica
- SE226 SCHILL, E.; APPEL, E.; GAUTAM, P.;  
SE34.1-022 SINGH, V.K.  
Metacarbonates from the lesser Himalaya: do they have potential for palaeomagnetic studies?
- SE227 WERNER, T.  
SE34.1-023 Kinematic relations between magnetic (AMS, AARM) and tectonic fabrics for the Niemcza fault zone, Sudetes foreland, SW Poland
- SE228 RESHETNYAK, M.  
SE34.1-024 Temporal spectra of SV

## SE34 Rockmagnetism, palaeomagnetism and environmental magnetism

### .2 Past and present geomagnetic field - Poster Session

Convener: Prevot, M.

Co-Convener(s): Love, J.J.; Schnepf, E.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Prevot, M.

- SE229 BRANDT, U.; NOWACZYK, N.R.;  
RAMRATH, A.; NEGENDANK, J.W.F.  
Palaeosecular variations as recorded in sediments of Italian crater lakes
- SE230 BORISOV, A.S.; HELLER, F.; KHASANOV, D.I.; NURGALIEV, D.K.; YAKUPOV, A.SH.; YASONOV, P.G.  
Geomagnetic variations in eastern Europe during the last 7500 years
- SE231 KUZNETSOV, V.V.  
Non-dynamo model for the Earth, planets and satellite magnetic field generation
- SE232 KUZNETSOV, V.V.; BOTVINOVSKY, V.V.  
Morphology of geomagnetic field created by Earth's interior current loops
- SE233 PELLETIER, J.D.  
Statistical analysis and modelling of variations in the geomagnetic field
- SE234 HEJDA, P.; RESHETNYAK, M.  
Some geomagnetic field features in "a<sub>0</sub>"-models
- SE235 CAMPS, P.; HENRY, B.; PREVOT, M.; FAYNOT, L.  
Geomagnetic paleosecular variation in Crozet islands (Indian Ocean) about one million years ago
- SE236 VANDAMME, D.; BRUNETON, M.  
Problem of elimination of directional data clusters in PSV studies
- SE237 KRUIVER, P.P.; DEKKERS, M.J.; LANGEREIS, C.G.  
Secular variation as recorded in Permian redbeds from Dome de Barrot, France
- SE238 ALGRINIER, P.; GALLET, Y.; LEWIN, E.  
On the age calibration of the geomagnetic polarity time scale
- SE239 SOLOGASHVILI, D.; GOGUTCHAICHVILI, A.; PAVLENICHVILI, E.; MAISSURADZE, G.  
Some aspects of Plio-Quaternary geomagnetic field in Georgia (Caucasus)



- SE240 NOWACZYK, N.R.  
Magnetostatigraphy of long sediment cores from lake Baikal, Siberia, sites BDP-93 and BDP-96
- SE241 KARLOUKOVSKI, V.  
Polarity reversal, recorded in dacitic volcanic rocks from the Dambaluc volcano, east Rhodope mountains, Bulgaria
- SE242 YASONOV, P.P.  
Chaos in geomagnetic reversal records: comparison of real and model data
- SE243 LEHMAN, B.; LAJ, C.; KISSEL, C.  
Relative paleointensity determinations from marine sediments: an empirical correction for grain size variations
- SE244 POSPELOVA, G.A.; SHARONOVA, Z.V.  
Paleomagnetic field intensity recorded in loesses of the Uzbekistan, 53-22 Ka
- SE245 REYRE, Y.  
The Earth obliquity oscillations, probable cause of the magnetic polarity reverses

### SE34 Rockmagnetism, palaeomagnetism and environmental magnetism .2 Past and present geomagnetic field

Convener: Prevot, M.

Co-Convener(s): Love, J.J.; Schnepf, E.

Friday, 24 April 1998

Lecture Room: R4

Chairperson: Prevot, M.

- 08:45 BLOXHAM, J.; KUANG, W.  
Numerical models of the geodynamo (Solicited Paper)
- 09:15 CARDIN, PH.  
What can we learn with experimental dynamos? (Solicited Paper)
- 09:45 LOVE, J.J.  
Paleomagnetic volcanic data and geometric regularity of reversals and excursions
- 10:00 GOGUITCHAICHVILI, A.; PREVOT, M.  
Transitional field paleointensity from two icelandic pliocene magnetic polarity reversals
- 10:15 HOFFMAN, K.A.  
Observation of field systematics during the Matuyama-Brunhes reversal and the possible role of electrical conductivity within D"
- 10:30 BREAK

Chairperson: Love, J.J.

- 11:00 HARRISON, C.G.A.  
Characteristics of the Earth's magnetic field which need to be explained by any model of secular variation (Solicited Paper)
- 11:30 KRISTJANSSON, L.  
Studies of late Cenozoic geomagnetic fields in Iceland (Solicited Paper)
- 12:00 SZEREMETA, N.; LAJ, C.; GUILLOU, H.; KISSEL, C.; CARRACEDO, J.-C.  
300 kys of geomagnetic paleosecular variation during the Brunhes period from a volcanic section at El Hierro (Canary Islands)
- 12:15 ROCHETTE, P.; VANDAMME, D.  
Long term variations of the main geomagnetic field features: global versus regional angular scatter

- 12:30 MAZAUD, A.; CHANNELL, J.E.T.  
The upper Olduvai polarity transition at ODP site 983 (Iceland Basin)
- 12:45 LEVI, S.; RON, H.  
N -> R polarity pransition in the Matuyama from the Jordan rift, northern Israel
- 13:00 LUNCH

Chairperson: Schnepf, E.

- 14:00 TAUXE, L.  
Sedimentary records of geomagnetic paleointensity: what can we believe in (Solicited Paper)
- 14:30 LAJ, C.; KISSEL, C.; MAZAUD, A.; BECK, L.; ELLIOT, M.; STONER, J.; CHANNELL, J.E.T.; VOELKER, A.; SARNTHEIN, M.  
High resolution stack of relative paleointensity records for the last 80 kys from North Atlantic deep sea cores
- 14:45 VEROSUB, K.L.; KARLIN, R.  
An ultrahigh resolution record of Holocene paleosecular variation from Saanich inlet, Vancouver Island, British Columbia: initial results
- 15:00 BRANDT, U.; NOWACZYK, N.R.; RAMRATH, A.; NEGENDANK, J.W.F.  
Palaeosecular variations as recorded in sediments of Italian crater lakes
- 15:15 MARCO, S.; RON, H.; STEIN, M.; MCWILLIAMS, M.O.  
A high-resolution record of geomagnetic secular variation from late Pleistocene Lake Lisan, Israel
- 15:30 NOWACZYK, N.R.; ANTONOW, M.  
Review of the Laschamp event - paleomagnetic signature and new age determinations by AMS<sup>14</sup>C
- 15:45 LAJ, C.; KISSEL, C.  
Geomagnetic field intensity at Hawaii for the last 400 kys from core HSDP (Big Island, Hawaii)
- 16:00 RIISAGER, J.; PERRIN, M.  
Paleomagnetism and paleointensity results of late cretaceous basalt from Madagascar
- 16:15 END OF SESSION

### SE34 Rockmagnetism, palaeomagnetism and environmental magnetism .3 Effect of chemical alteration on magnetization

Convener: Özdemir, Ö.

Co-Convener(s): Roberts, A.P.

Tuesday, 21 April 1998

Lecture Room: R4

Chairperson: Roberts, A.P.

Editor: Hoffmann, V.

- 09:00 ÖZDEMİR, Ö.  
SE34.3- Effect of chemical changes on magnetization (Solicited Paper)  
001
- 09:30 SMETHURST, M.T.; SYMONS, D.T.A.;  
SE34.3- LEWCHUK, M.T.; ASHTON, J.H.  
002 Hercynian neomorphism and genesis of the Navan Pb-Zn deposit, Ireland, from paleomagnetism
- 09:45 ROBERTS, A.P.  
SE34.3- Sedimentary greigite (Fe<sub>3</sub>S<sub>4</sub>): occurrences, formation  
003 and magnetic properties

- 10:00 **SAGNOTTI, L.**; WINKLER, A.  
SE34.3-004 Rock magnetism and palaeomagnetism of greigite-bearing mudstones in the Italian peninsula  
10:15 **PASSIER, H.F.**; DEKKERS, M.J.; DE LANGE, G.J.  
SE34.3-005 Alteration of magnetic signals in eastern Mediterranean sediments  
10:30 BREAK

Chairperson: Özdemir, Ö.  
Editor: Hoffmann, V.

- 11:00 **PREVOT, M.**; KÖRNER, U.  
SE34.3-006 Chemical alteration of magnetic minerals in nature and paleointensity experiments on volcanic rocks (Solicited Paper)  
11:30 **KÖRNER, U.**; PREVOT, M.; POIDRAS, T.  
SE34.3-007 CRM experiments and pseudo-paleointensity measurements on basaltic rocks with initially low Curie temperatures  
11:45 **VLÁG, P.**; ALVA, L.; DE BOER, C.; GONZALEZ, S.; URRUTIA, J.  
SE34.3-008 Magnetic properties of a Holocene lava flow in central Mexico  
12:00 **ZEGERS, T.E.**; DEKKERS, M.J.  
SE34.3-009 Remagnetisation of Devonian limestones in the Ardennes in connection with fluid flow and deformation  
12:15 **HELM, C.M.**; VEROSUB, K.L.; ZIERENBERG, R.  
SE34.3-010 Influence of heavy metal cations on the hysteresis properties of iron-oxyhydroxides  
12:30 END OF SUB-SESSION

### **SE34 Rockmagnetism, palaeomagnetism and environmental magnetism** **.3 Effect of chemical alteration on magnetization - Poster Session**

Convener: Özdemir, Ö.  
Co-Convener(s): Roberts, A.P.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: RHODES - SE  
Chairpersons: Özdemir, Ö.; Roberts, A.P.  
Editor: Hoffmann, V.

- SE247 **KOSAREV, V.E.**; **ZHARKOV, I.Y.**  
SE34.3-011 The cause for secondary chemical magnetization of particoloured rocks of the Tatarian stage  
SE248 **JELENSKA, M.**; KAPICKA, A.  
SE34.3-012 Preliminary results of chemical remagnetization under uniaxial compression  
SE249 **COSTANZO-ALVAREZ, V.**; GAGO, J.L.; WILLIAMS, W.  
SE34.3-013 Rock magnetic characterization of a formational contact in Cretaceous strata (eastern Venezuela)  
SE250 **ALDANA, M.**; COSTANZO-ALVAREZ, V.; GAGO, J.L.; SUAREZ, N.  
SE34.3-014 TSC technique applied to the characterization of sedimentary lithologies at the Pertigalete sequence (northeastern Venezuela)  
SE251 **COSTANZO-ALVAREZ, V.**; COLMENARES, L.  
SE34.3-015 Lowrie IRM experiments in samples of three oil wells at La Victoria field (southwestern Venezuela)

### **SE34 Rockmagnetism, palaeomagnetism and environmental magnetism** **.4 Sediment magnetic records of climatic cycles and events**

Convener: Williamson, D.  
Co-Convener(s): Geiss, C.E.  
Wednesday, 22 April 1998  
Lecture Room: R4  
Chairperson: Florindo, F.  
Editors: Geiss, C.; Williamson, D.

- 09:00 **HELLER, F.**  
SE34.4-001 Rock magnetism and palaeoenvironment of loess/palaeosol sequences (Solicited Paper)  
09:30 **NAWROCKI, J.**; BAKHMUTOV, V.; BOGUICKI, A.; DOLECKI, L.  
SE34.4-002 The paleo- and petromagnetic record in the Polish and Ukrainian loess-palaeosol sequences  
09:45 **HUS, J.**; **JORDANOVA, D.**; GEERAERTS, R.; EVLOGIEV, J.  
SE34.4-003 Palaeomagnetic and rock magnetic properties of a loess-palaeosol sequence in the key section Viatovo (N.E. Bulgaria)  
10:00 **VLÁG, P.**; OCHES, E.A.; BANERJEE, S.K.  
SE34.4-005 Magnetic concentration variations in loess sequences in central Alaska: reflecting changes in wind directions and intensities?  
10:15 **HESLOP, D.**; SHAW, J.; BLOEMENDHAL, J.; LATHAM, A.; PARKER, E.  
SE34.4-006 Sub-millennial scale variations in East Asian monsoon systems recorded by dust deposits from the north-western Chinese loess plateau  
10:30 **STOCKHAUSEN, H.**; THOUVENY, N.  
SE34.4-007 Rockmagnetic properties of Eemian sediments from Lacustrine sections in France: a possible link to climate?  
10:45 **GEISS, C.E.**; BANERJEE, S.K.  
SE34.4-008 Climate variability as seen in two interglacial records from the midwestern U.S.A.  
11:00 **NOWACZYK, N.R.**; HARWART, S.; MELLES, M.  
SE34.4-009 A rock magnetic record from Lama late - northern Siberia  
11:15 LUNCH  
12:00 Business Meetings

Chairperson: N.N.  
Editors: Geiss, C.; Williamson, D.

- 14:00 **WILLIAMSON, D.**; BARKER, P.A.; JACKSON, M.J.; MARVIN, J.; MERDADI, O.; TAIEB, M.; THOUVENY, N.; VINCENS, A.  
SE34.4-010 Rock-magnetic signatures of pedogenesis and climate variability in southern Tanzania (lake Massoko) during the last 35 kyr  
14:15 **HU, S.**; APPEL, E.; WANG, S.  
SE34.4-011 Incursion of sea water into Gucheng lake detected by magnetic, biologic and chemical data  
14:30 **HU, S.**; APPEL, E.; WANG, S.  
SE34.4-012 A magnetic study on lake sediments from Zoige basin, eastern Tibetan Plateau, China (Poster)  
14:35 **FLORINDO, F.**; ZHU, R.; GUO, B.  
SE34.4-013 Palaeorainfall estimation for the last two glacial cycles from the Chinese Loess Plateau: new data (Poster)

SE

- 14:40 **JELINOWSKA, A.; TUCHOLKA, P.;**  
SE34.4- BADAUT-TRAUTH, D.  
014 Environmental depending variation of magnetic properties of sediments at Laminæ scale (Casplan Sea) (Poster)
- 14:45 **NURGALIEV, D.K.**  
SE34.4- Upper Permian cyclostratigraphy of east Russian  
015 plate: orbital periodicity and palaeomagnetic data (Poster)
- 14:50 **MUKHAMADIEV, R.; NURGALIEV, D.K.;**  
SE34.4- **SHABALIN, N.**  
016 Palaeoclimatic changes in magnetic susceptibility record of the Permian clays, east European plate, Russia (Poster)
- 14:55 **VEROSUB, K.L.; KARLIN, R.**  
SE34.4- Environmental magnetic record of the late Pleisto-  
017 cene to Holocene transition as recorded at Saanich inlet, Vancouver Island, British Columbia
- 15:10 **THOUVENY, N.; CANDON, L.; DELANGHE, D.;**  
SE34.4- **LANCELOT, Y.; MORENO, E.**  
018 Climatic and oceanic trends in the last climatic cycle viewed by the rock-magnetic spyglass
- 15:25 **AVERBUCH, O.; DECONINCK, J.-F.; PROUST, J.-N.; MAMMOUDIA, M.**  
SE34.4- High resolution magnetic and mineralogical record  
019 of paleoenvironmental changes within the Kimmeridgian-Tithonian formations of the Boulonnais region (northern France)
- 15:40 **ROSE, TH.; KRUMSIEK, K.; PORT, G.;**  
SE34.4- **HAMBACH, U.**  
020 Paleo- and rockmagnetic studies of the Kirchrode cores (Albian, north-west German basin)
- 15:55 **PORT, G.; KRUMSIEK, K.; HAMBACH, U.;**  
SE34.4- **ROSE, TH.**  
021 Orbital forcing of magnetic properties: preliminary results of two ODP sides (North Atlantic, Mediterranean) (Poster)
- 16:00 **BARTHES, V.; POZZI, J.P.;**  
SE34.4- **VIBERT-CHARBONNEL, P.**  
022 High-resolution record of magnetic susceptibility obtained by logging and tuned by orbital frequencies
- 16:15 **MORENO, E.; THOUVENY, N.; CANDON, L.;**  
SE34.4- **DELANGHE, D.**  
023 Magnetic signatures of Heinrich events since isotopic stage 7 along the Iberian margin (Poster)
- 16:20 **BECK, L.; KISSEL, C.; SOHLEID, P.; BOYLE, E.A.**  
SE34.4- Detailed study of the magnetic properties related  
024 to climate variations of core MD95-2034 (Poster)
- 16:25 **LAJ, C.; KISSEL, C.; LABEYRIE, L.; LEHMAN, B.**  
SE34.4- Magnetic grain sizes of North Atlantic sediments  
025 spanning the last two climatic cycles (Poster)
- 16:30 **HOFMANN, A.; KIPFSTUHL, J.; KUHN, G.;**  
SE34.4- **FUHRER, K.**  
026 Rapid climate variations and calving events during the last glacial in the Scotia Sea, Antarctica (Poster)
- 16:35 END OF SUB-SESSION

## SE34 Rockmagnetism, palaeomagnetism and environmental magnetism

### .4 Sediment magnetic records of climatic cycles and events - Poster Session

Convener: Williamson, D.  
Co-Convener(s): Geiss, C.E.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Wednesday, 17:00 - 19:00  
Poster Area: RHODES - SE  
Editors: Geiss, C.; Williamson, D.

- SE252 **HU, S.; APPEL, E.; WANG, S.**  
SE34.4-012 A magnetic study on lake sediments from Zoige basin, eastern Tibetan Plateau, China
- SE253 **FLORINDO, F.; ZHU, R.; GUO, B.**  
SE34.4-013 Palaeorainfall estimation for the last two glacial cycles from the Chinese Loess Plateau: new data
- SE254 **JELINOWSKA, A.; TUCHOLKA, P.;**  
SE34.4-014 **BADAUT-TRAUTH, D.**  
Environmental depending variation of magnetic properties of sediments at Laminæ scale (Casplan Sea)
- SE255 **NURGALIEV, D.K.**  
SE34.4-015 Upper Permian cyclostratigraphy of east Russian plate: orbital periodicity and palaeomagnetic data
- SE256 **MUKHAMADIEV, R.; NURGALIEV, D.K.;**  
SE34.4-016 **SHABALIN, N.**  
Palaeoclimatic changes in magnetic susceptibility record of the Permian clays, east European plate, Russia
- SE257 **PORT, G.; KRUMSIEK, K.; HAMBACH, U.;**  
SE34.4-021 **ROSE, TH.**  
Orbital forcing of magnetic properties: preliminary results of two ODP sides (North Atlantic, Mediterranean)
- SE258 **MORENO, E.; THOUVENY, N.; CANDON, L.;**  
SE34.4-023 **DELANGHE, D.**  
Magnetic signatures of Heinrich events since isotopic stage 7 along the Iberian margin
- SE259 **BECK, L.; KISSEL, C.; SOHLEID, P.; BOYLE, E.A.**  
SE34.4-024 Detailed study of the magnetic properties related to climate variations of core MD95-2034
- SE260 **LAJ, C.; KISSEL, C.; LABEYRIE, L.;**  
SE34.4-025 **LEHMAN, B.**  
Magnetic grain sizes of North Atlantic sediments spanning the last two climatic cycles
- SE261 **HOFMANN, A.; KIPFSTUHL, J.; KUHN, G.;**  
SE34.4-026 **FUHRER, K.**  
Rapid climate variations and calving events during the last glacial in the Scotia Sea, Antarctica

**SE34 Rockmagnetism, palaeomagnetism and environmental magnetism**  
**.5 New challenges in environmental research: magneto-monitoring of anthropic influence to ecosystems**

Convener: Scholger, R.  
 Co-Convener(s): Rochette, P.  
**Thursday, 23 April 1998**  
 Lecture Room: R4  
 Chairperson: Rochette, P.  
 Editor: Rochette, P.

14:00 **LEVEQUE, F.**; LECOANET, H.; MATHE, P.-E.;  
 SE34.5- VANDAMME, D.; BEN-ATIG, F.; VERON, A.;  
 001 AMBROSI, J.-P.

Monitoring of anthropogenic heavy metals accumulated in contaminated soils: potential of magnetic properties approach on multisource zone

14:15 **VAN OORSCHOT, I.H.M.**; DEKKERS, M.J.  
 SE34.5- Parameters affecting the dissolution rate of magnetite and maghemite in the CBD extraction technique  
 002

14:30 **GEORGEAUD, V.M.**; AMBROSI, J.-P.;  
 SE34.5- ROCHETTE, P.; BOTTERO, J.Y.  
 003 Heavy metal sorption onto magnetite: case study of cadmium

14:45 **SCHOLGER, R.**  
 SE34.5- Standardization of magnetic susceptibility measurements: calibration of laboratory and field instruments (Poster)  
 004

14:50 **PETROVSKY, E.**; HRABAK, P.; KAPICKA, A.;  
 SE34.5- JORDANOVA, N.  
 005 Comparison between magnetic and geochemical mapping of soil contamination in Prague (Poster)

14:55 **RAKHMATULLIN, R.**; **RAVILOVA, N.**  
 SE34.5- Content of heavy metals and magnetic properties of soils in Kazan, Russia (Poster)  
 006

15:00 **KNAB, M.**; APPEL, E.; HOFFMANN, V.  
 SE34.5- Magnetic measurements for the detection of roadside pollution: distribution of heavy metal contamination (Poster)  
 007

15:05 **ZERGENYI, R.S.**; HIRT, A.M.; LANCI, L.;  
 SE34.5- LOWRIE, W.; LÜSCHER, P.

Magnetic mapping of soils in Alpine area  
 15:20 **KAPICKA, A.**; PETROVSKY, E.; JORDANOVA, N.; HOFFMANN, V.; ZAPLETAL, K.  
 SE34.5- Search for atmospherically deposited fly-ash magnetite in soils using magnetic characteristics  
 009

15:35 **BITYUKOVA, L.**; SCHOLGER, R.; BIRKE, M.  
 SE34.5- Magnetic susceptibility as indicator of environmental pollution of soils in Tallinn (Estonia)  
 010

15:50 **STRZYSZCZ, Z.**; **MAGIERA, T.**  
 SE34.5- Magnetic susceptibility and lead and zinc concentration in forest topsoil from the border ranges of Poland, Slovakia and Czech Republic  
 011

16:05 **MAGIERA, T.**; **STRZYSZCZ, Z.**  
 SE34.5- Using of magnetic susceptibility measurement as a preliminary method in study of soil pollution in Swierklany district (Katowice Province - south Poland)  
 012

16:20 **HIRT, A.M.**; BÄCHLER, D.; LANCI, L.;  
 SE34.5- ZERGENYI, R.; STURM, M.; LOTTER, A.F.  
 013 Magnetic properties and iron cycling for the last 110 years in the Baldeggersee, Switzerland

16:35 **WIDEMANN, D.**; **VEROSUB, K.L.**; MOUNT, J.  
 SE34.5- Evidence for anthropogenic increase in the flux of ferromagnetic material into the Clear Lake Basin, northern California  
 014  
 16:50 **MÖRNER, N.-A.**  
 SE34.5- Environmental magnetism: identification of the onset of Iron Ore industry in Sweden  
 015  
 17:05 END OF SUB-SESSION

**SE34 Rockmagnetism, palaeomagnetism and environmental magnetism**  
**.5 New challenges in environmental research: magneto-monitoring of anthropic influence to ecosystems - Poster Session**

Convener: Scholger, R.  
 Co-Convener(s): Rochette, P.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:30 - 19:00**  
 Poster Area: RHODES - SE  
 Chairperson: Rochette, P.  
 Editor: Rochette, P.

SE262 **SCHOLGER, R.**  
 SE34.5-004 Standardization of magnetic susceptibility measurements: calibration of laboratory and field instruments

SE263 **PETROVSKY, E.**; HRABAK, P.; KAPICKA, A.; JORDANOVA, N.  
 SE34.5-005 Comparison between magnetic and geochemical mapping of soil contamination in Prague

SE264 **RAKHMATULLIN, R.**; **RAVILOVA, N.**  
 SE34.5-006 Content of heavy metals and magnetic properties of soils in Kazan, Russia

SE265 **KNAB, M.**; APPEL, E.; HOFFMANN, V.  
 SE34.5-007 Magnetic measurements for the detection of roadside pollution: distribution of heavy metal contamination

**SE34 Rockmagnetism, palaeomagnetism and environmental magnetism**  
**.6 Palaeomagnetism and tectonic evolution of the Mediterranean area**

Convener: Pares, J.M.  
 Co-Convener(s): Dinarès-Turell, J.  
**Thursday, 23 April 1998**  
 Lecture Room: R4  
 Chairperson: Jelenska, M.

08:30 **SPERANZA, F.**; MATTEI, M.; SAGNOTTI, L.  
 Structural and paleomagnetic data from the Amantea basin (Calabria, Italy): insights on the geometry of the late Miocene Tyrrhenian rift

08:45 **ROCHETTE, P.**; GIRARD, M.; SPELLA, M.  
 Tertiary rotation of the Corsica-Sardinia block: new results from southern Corsica volcanics

09:00 **DUERMEIJER, C.E.**; LANGEREIS, C.G.  
 Timing of Neogene tectonic events in the central Mediterranean: an integrated paleomagnetic study

09:15 **MUTTONI, G.**; LANCI, L.; ARGNANI, A.; ABRAHAMSEN, N.; CIBIN, U.; HIRT, A.M.; LOWRIE, W.

Paleomagnetism in the northern Apennines, Italy

SE

- 09:30 **KRS, M.; KRISOVA, M.; PRUNER, P.; MAN, O.; VENHODOVA, D.**  
Geodynamic evolution of Permian to Neogene rock formations in the W. Carpathians based on summary of previously and recently derived palaeomagnetic data
- 09:45 **MARTON, E.; MARTON, P.; PAMIC, J.**  
A puzzling piece of the Pannonian puzzle: Tertiary paleomagnetic results from the W part of the Tisza-Dacia megaunit
- 10:00 **HAUBOLD, H.; MAURITSCH, H.J.**  
Paleomagnetism of Jurassic sediments from the Fore-Balkan and the Stara Planina Ranges (NW Bulgaria) (Solicited Paper)
- 10:30 **BREAK**

Chairperson: N.N.

- 11:00 **JELENSKA, M.; BAHMUTOV, V.; KONSTANTINENKO, L.**  
New paleomagnetic data from Silurian succession of the Dniestr Basin Ukraina
- 11:15 **ÖZCEP, F.; ORBAY, N.**  
Preliminary paleomagnetic results on the Neogene volcanism of Afyon region (central Anatolia)
- 11:30 **RON, H.; SHAMIR, G.**  
Paleomagnetic test for continuous crustal deformation across the southern Dead Sea transform
- 11:45 **PUEYO-MORER, E.L.; PARES, J.M.; MILLAN-GARRIDO, H.; POCÓVI-JUAN, A.**  
Oblique thrust ramps and spurious apparent rotations on paleomagnetic analysis
- 12:00 **LEWCHUK, M.; HENRY, B.; ROUVIER, H.; MACQUAR, J.; LEACH, D.**  
Paleomagnetism of Mississippi valley-type mineralization in southern France and Cenozoic orogenesis
- 12:15 **YELLES, A.; DERDER, M.; SMITH, B.; BAYOU, B.; HENRY, B.; DJELLIT, H.**  
Preliminary results of the palaeomagnetic study of a Namurian formation from the Ahnet basin (Saharan Craton, Algeria)
- 12:30 **SMITH, B.; BAYOU, B.; DERDER EL MESSAOUD, M.; HENRY, B.; YELLES-CHAOUCHE, A.; DJELLIT, H.**  
Tectonic history of the dolerites from the Reggane basin (Algeria) as evidenced by the paleomagnetism
- 12:45 **PUEYO-MORER, E.L.; MILLAN-GARRIDO, H.; POCÓVI-JUAN, A.**  
Temporal and spatial variability of the degree of rotation in the Jaca basin (southern Pyrenees) deduced from structural and paleomagnetic analysis
- 13:00 **END OF SUB-SESSION**

## Geophysical Journal International

### Journal of Geodynamics

#### Tectonics

the three EGS journals for the Section on Solid Earth Geophysics for the publication of your contribution to the 23rd General Assembly

## SE34 Rockmagnetism, palaeomagnetism and environmental magnetism

### .6 Palaeomagnetism and tectonic evolution of the Mediterranean area - Poster Session

Convener: Pares, J.M.  
Co-Convener(s): Dinarès-Turell, J.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: RHODES - SE

- SE266 **AVIGAD, D.; BAER, G.; HEIMANN, A.**  
Block rotations and continental extension in the central Aegean Sea (Tinos and Mykonos islands)
- SE267 **EDEL, J.B.**  
Pre- and post-folding magnetizations in the Plan-de-la-Tour volcano-sedimentary syncline (Maures, S. France). Late Variscan evolution of the western Mediterranean basement
- SE268 **KECHRA, F.; VANDAMME, D.; ROCHETTE, P.; CHOUKROUNE, P.**  
Remagnetisation and tectonic analyses on Cevennes fault
- SE269 **COSENTINO, D.; CIPOLLARI, P.; FLORINDO, F.**  
Milankovitch periodicities recorded in an upper miocene sequence from central Apennines, Italy
- SE270 **HOUSA, V.; KRS, M.; PRUNER, P.; MAN, O.; VENHODOVA, D.; CECCA, F.; NARDI, G.; PISCITELLO, M.**  
Correlation of high-resolution magnetostratigraphic and micropalaeontological data across the J/C boundary strata in Brodno (W. Carpathians, W. Slovakia) and the Bosso Valley (Umbria, central Italy)

## SE35 Archaeology and archaeomagnetism

### .1 Archaeological prospection

Convener: Schmidt, A.  
Co-Convener(s): Fassbinder, J.  
**Monday, 20 April 1998**  
Lecture Room: R11  
Chairperson: Schmidt, A.

- 14:00 **ORBONS, P.J.**  
Geophysical support in large scale archaeological prospections, recent case-studies and research (Solicited Paper)
- 14:30 **MARMET, E.; BINA, M.; FEDOROFF, N.; TABBAGH, A.**  
Relationship between anthropisation and the magnetic properties of soils
- 14:45 **PIRO, S.; PIERDICCA, N.**  
Analysis of GPR pulse response from experimental and archaeological test sites
- 15:00 **NEUBAUER, W.; EDER-HINTERLEITNER, A.; MELICHAR, P.**  
Improvements in high resolution archaeological magnetometry
- 15:15 **BECKER, H.; FASSBINDER, J.**  
Cesium magnetometry for large area prospection at Qantir-Piramesse (Egypt)

- 15:30 RABEL, W.; BRUECKNER, H.; BRUHN, C.; STUEMPER, H.; WOELZ, S.  
The ancient lion harbour of Miletus: geophysical investigations
- 15:45 KOPPELT, U.; ABRAHAMSEN, N.; DITTRICH, G.; HIRSEKORN, V.; JACOBSEN, B.H.; SMEKALOVA, T.; VOSS, O.  
Techniques applied to magnetic investigation of iron-production sites in central Europe
- 16:00 BASILE, V.; CARROZZO, M.T.; NEGRI, S.; NUZZO, L.; QUARTA, T.; VILLANI, A.V.  
Combined GPR and seismic investigations in urban area (Lecce - Italy)
- 16:15 LORRA, S.; STÜMPER, H.; THOMSEN, D.  
2D and 3D interpretation techniques of GPR data in archaeological prospecting
- 16:30 BREAK

Chairperson: Orbons, P.J.

- 17:00 SCHMIDT, A.; VERNON, R.; MCDONNELL, G.  
Advanced magnetometry for the characterisation of early iron-working sites
- 17:15 LÜCK, E.; EISENREICH, M.  
Geophysical prospections of archaeological sites in Brandenburg
- 17:30 PETERS, C.  
Quantification of superparamagnetism within lewisian archaeological soils
- 17:45 EDER-HINTERLEITNER, A.; SEREN, S.; NEUBAUER, W.  
An approach on 3D archaeological interpretation of ground penetrating radar data
- 18:00 HERWANGER, J.; MAURER, H.; LECKEBUSCH, J.; GREEN, A.  
Processing and inversion of magnetic gradient data in archaeological prospecting
- 18:15 COSKUN, N.; CERTEL, R.  
Direct interpretation of combined sounding-profiling data
- 18:30 MRLINA, J.; TEALEB, A.A.; ISSAWY, E.A.M.; RADWAN, A.H.A.; HASSAN, G.S.; SAKR, K.O.  
Microgravimetric investigations in the valleys of the Kings and Queens, Luxor, Egypt
- 18:45 END OF SUB-SESSION
- 19:30 Reception

### SE35 Archaeology and archaeomagnetism .1 Archaeological prospecting - Poster Session

Convener: Schmidt, A.

Co-Convener(s): Fassbinder, J.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Fassbinder, J.

- SE271 BATT, C.; DOCKRILL, S.  
Integrating magnetic measurements with archaeological data
- SE272 FECHANT, C.; DAVID, C.; DORIGNY, A.; NEGRO, G.; NAIZET, F.  
Magnetic, electric, radioactivity and thermal infrared imaging for interpretation of archaeological deposits stratigraphy

- SE273 JACOBSEN, B.H.; KOPPELT, U.; ABRAHAMSEN, N.  
Interactive inverse modelling of magnetic dipole clusters and archaeometry of iron age slags
- SE274 MARUKAWA, Y.; KAMEI, H.; SAITO, M.  
Estimation of systematic errors of 3-component geomagnetic data using the ABIC-minimization method
- SE275 PEREZ GARCIA, V.; PUJADES, L.; CANAS, J.A.; CLAPES, J.; OSORIO, R.  
Analysis of the change in the velocity of the electromagnetic waves with the water content
- SE276 DITTRICH, G.; KOPPELT, U.; LANGE, J.M.; WUYTACK, K.  
Top soil conditions and detectability of archaeological objects
- SE277 DITTRICH, G.; KOPPELT, U.  
Three-dimensional reconstruction of archaeological features using geomagnetic data
- SE278 EL ERAKI, M.  
Archaeological interpretation of magnetic data
- SE279 SLEPAK, Z.  
Geophysics for archaeological purposes on the territory of Kazan Kremlin, Kazan, Russia
- SE280 COSKUN, N.; SZYMANSKI, J.E.  
A discussion on the resolution of two dimensional resistivity modelling
- SE281 MORI, M.; KAMEI, H.; NAKAI, M.; KUDO, H.  
A high density resistivity survey and an experimental measurement of temperatures of the ground on Hirui-Otsuka mounded tomb in Ogaki, Japan
- SE282 NEUBAUER, W.; EDER-HINTERLEITNER, A.; MELICHAR, P.  
Geomagnetic prospecting of an early neolithic settlement in Asparn/lower Austria

### SE35 Archaeology and archaeomagnetism .2 Archaeomagnetism and secular variations

Convener: Kovacheva, M.

Co-Convener(s): Chauvin, A.

Monday, 20 April 1998

Lecture Room: R11

Chairperson: Chauvin, A.

- 08:30 BATT, C.; MENG, Z.; NOEL, M.  
New archaeomagnetic studies in China and their use in elucidating geomagnetic secular variations
- 08:45 YANG, S.; SHAW, J.; DAGLEY, P.  
Updated geomagnetic dipole for the period 0-12,000 years
- 09:00 SHAW, J.  
Microwave archaeointensity results from Egyptian ceramics
- 09:15 BAAG, C.  
Two new archaeomagnetic records from South Korea
- 09:30 LIGHT, J.P.; VEROSUB, K.L.; MEHRINGER JR., P.J.  
Fine-tuning the palaeosecular variation record from Fish Lake, Oregon, with archaeomagnetic results from the nearby Lost Dunes archaeological site

- 09:45 **MAURITSCH, H.J.**; SCHOLGER, R.  
Historic melting places; source of paleofield information
- 10:00 **SCHNEPP, E.**; PUCHER, R.  
A German archaeomagnetic secular variation curve from 1000 to 1800 AD
- 10:15 **KOVACHEVA, M.**; GERGOVA, D.; JORDANOVA, N.; KIROV, V.  
Secular geomagnetic variations and dating of the archaeological remains
- 10:30 BREAK

Chairperson: Shaw, J.

- 11:00 **PELLETIER, J.D.**  
Power-spectral analysis of archeomagnetic and secular variations
- 11:15 **KOVACHEVA, M.**; CHAUVIN, A.; JORDANOVA, N.; KARLOUKOVSKI, V.; GARCIA, J.  
Interlaboratory comparison of archaeo-intensity study and anisotropy effect
- 11:30 **LENGYEL, S.**; EIGHMY, J.  
Assessment of the moving window method of secular variation curve construction: analysis of the Blindman problem
- 11:45 **LANOS, PH.**  
Bayesian approach using penalized maximum likelihood to smoothing time series carrying errors both on time and measure: consequences for archaeomagnetism
- 12:00 **LE GOFF, M.**; KOVACHEVA, M.; LANOS, P.; DALY, L.  
Comparison of three smoothing algorithms performed on the eight millennium archeomagnetic data from Bulgaria
- 12:15 **JENG, Y.**; CHEN, K.-J.  
Geomagnetic evidence for the time-selecting concept of ancient Chinese health promotion
- 12:30 **EVANS, M.**; KONDOPOULOU, D.; SPATHARAS, V.; AIDONA, E.  
Archaeomagnetic dating in Macedonian kilns (N. Greece)
- 12:45 **TARLING, D.**  
Developments in the global archaeomagnetic directional database \*
- 13:00 END OF SUB-SESSION
- 17:00 Opening
- 19:30 Reception

### **SE35 Archaeology and archaeomagnetism .2 Archaeomagnetism and secular variations - Poster Session**

Convener: Kovacheva, M.

Co-Convener(s): Chauvin, A.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

- SE283 **ZANELLA, E.**; GURIOLI, L.; CIARALLO, A.; CIONI, R.; LANZA, R.  
Comparison between remanent magnetizations of Vesuvius pyroclastics of 79 A.D. and Pompeii mural paintings

### **SE36 Potential fields in geodesy, geophysics and geology (co-sponsored by G) I**

Convener: Jacoby, W.R.

Co-Convener(s): Braitenberg, C.; Grafarend, E.W.

Tuesday, 21 April 1998

Lecture Room: HERMES

Chairperson: N.N.

#### Global gravity field, geodesy, geodynamics, rotation: Earth and planets

- 11:00 **PELTIER, W.R.**; PARI, G.  
Mantle viscosity, glacial isostasy and the anomalous gravity field (Solicited Paper)
- 11:30 **DENIS, C.**; REGISTER, Y.; TOMECKA-SUCHON, S.  
How large is the non-hydrostatic part of the geopotential coefficient  $C_{20}$ ?
- 11:45 **VARGA, P.**  
Temporal variation of second degree geopotential
- 12:00 **KAKKURI, J.**; WANG, Z.  
Influences of the variations in the shape, size, and mass distribution on the global and local gravity field of the Earth
- 12:15 **TOMECKA-SUCHON, S.**; **DENIS, C.**; REGISTER, Y.  
On incremental stresses caused by tides, variable rotation rate or surface mass loads, and earthquake triggering
- 12:30 **BEGHEIN, C.**; TOMECKA-SUCHON, S.; **DENIS, C.**; REGISTER, Y.; VARGA, P.  
Palaeorotation and changes in time of the Earth's internal structure
- 12:45 **VERMEERSEN, L.L.A.**; SABADINI, R.  
Theory of post-seismic deformation and gravity potential field
- 13:00 LUNCH

Chairperson: N.N.

- 14:00 **SOLDATI, G.**; PIERSANTI, A.; BOSCHI, E.  
Global postseismic deformation: effects on the gravity field
- 14:15 **DONG, D.**; **DICKEY, J.O.**; CHAO, Y.; CHENG, M.K.  
Comparison of observed geocenter variations with model predictions
- 14:30 **REGISTER, Y.**; AMALVICT, M.; TOMECKA-SUCHON, S.; DENIS, C.  
On core modes
- 14:45 **COX, C.M.**; PERINI, J.P.; LEMOINE, F.G.; NEREM, R.S.  
Goddard Venus gravity model development including the application of alternate solution constraint techniques
- 15:00 **BALLANI, L.**; STROMEYER, D.; GREINER-MAI, H.  
On the structure of the magnetic field at the core-mantle boundary (Poster)

#### Analysis, inversion and general treatment of potential field data

- 15:05 **MARTINEC, Z.**  
The role of magnetic vector potential in 2-D electromagnetic induction in a spherical Earth

- 15:20 WEBERS, W.  
On applying the regularization WIGCONT to potential field downward continuation - consequences
- 15:35 JACOBY, W.R.; SMILDE, P.  
Deriving gravity field parameters from terrestrial gravity measurements
- 15:50 STRAKHOV, V.N.; SCHÄFER, U.; STRAKHOV, A.V.  
Regional approximations of the gravity anomaly field in central and northern Europe
- 16:05 FEDI, M.; FLORIO, G.; RAPOLLA, A.  
A method to determine the excess mass and the magnetic moment from potential field anomalies
- 16:20 HOLOTA, P.  
An effective mass distribution among sources of the external gravity field
- 16:35 BRAITENBERG, C.; ZADRO, M.  
The spectral evaluation of the gravitational potential field and its derivatives: the SE-Alps as an example
- 16:50 END OF PART I

### SE36 Potential fields in geodesy, geophysics and geology (co-sponsored by G) - Poster Session

Convener: Jacoby, W.R.  
Co-Convener(s): Braitenberg, C.; Grafarend, E.W.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: RHODES - SE

- SE285 BALLANI, L.; STROMEYER, D.; GREINER-MAI, H.  
On the structure of the magnetic field at the core-mantle boundary
- SE286 COHEN, Y.; PURUCKER, M.  
Introducing long wavelenthes in global magnetization models to delineate age provinces
- SE287 DANCKWARDT, E.; JACOBS, F.  
A rapid method on three-dimensional electrical resistivity
- SE288 RITTER, S.  
On integral operators of potential theory and its applications
- SE289 AKYOL, N.; PINAR, R.  
Analysis of gravity data with 3-D Hilbert transformation
- SE290 ANKAYA, O.; AKDEMIR, Ö.; AKCIG, Z.; PINAR, R.  
Application of the Hilbert transform and power spectra in the potential fields
- SE291 SMILDE, P.L.  
Non-linear gravity inversion incorporating both density and geometric parameters
- SE292 BILIARSKA, R.; ZHELEV, ZH.; BILIARSKA, I.  
On the solution of the inverse problems of potential fields with an optimal ortogonal prism
- SE293 PINTO, V.; RIVERO, L.; CASAS, A.  
An interactive 2D and 3D gravity modelling programme for personal computers
- SE294 MLADENOVIC, M.; SMILJANIC, N.  
Study of ultramfic belts in inner Dinarides and Vardar zone

- SE295 KUBLER, L.; BERGMAN, S.; MARTINSSON, O.  
A synthesis of the geology and geophysics of the northern Norrbotten ore province, Sweden
- SE296 RUOTOISTENMAKI, T.  
Midnorden project, geophysics sub-project: combined geophysical maps of Central and Northern Fennoscandia and their applications in ore prospecting and tectoninc analysis
- SE297 O'REILLY, B.M.; READMAN, P.W.; MURPHY, T.  
Gravity patterns and carboniferous base-metal ore deposits in Ireland
- SE298 REEH, G.A.; HASSAN, H.  
Geophysical investigations into the deep structure of Mamoura area, offshore Libya
- SE299 KAMINSKY, V.D.; PISKAREV, A.L.; POSELOV, V.A.  
The Earth crust structure in the continent-ocean transition zone according to potential field data interpretation in Arctic
- SE300 MRLINA, J.; SPICAK, A.  
Changes of gravity in relation to other geodynamic phenomena in western Bohemia

### SE36 Potential fields in geodesy, geophysics and geology (co-sponsored by G) II

Convener: Jacoby, W.R.  
Co-Convener(s): Braitenberg, C.; Grafarend, E.W.  
Wednesday, 22 April 1998  
Lecture Room: GALLIENI 5  
Chairperson: N.N.

- 09:00 BULAKH, E.; MARKOVA, M.; YAKYMCHUK, N.  
A solution of inverse problem of potential in the class of star bodies
- 09:15 FEDI, M.; LENARDUZZI, L.; PRIMICERI, R.; QUARTA, T.  
Localized wavelet denoising of potential field data
- 09:30 YAKYMCHUK, N.; YAKYMCHUK, Y.  
The new approach to recounting of potential fields
- 09:45 YAKYMCHUK, M.; YAKYMCHUK, Y.; CHERNY, A.; KORCHAGIN, I.; KOZLENKO, Y.  
The interpretation of geoid anomalies by an automat-ed fitting method
- 10:00 PAPP, G.; BENEDEK, J.  
Numerical determination of field lines in gravitational space
- 10:15 STRYKOWSKI, G.  
Mapping gravi-equipotential surfaces inside masses by direct use of Newtons integral
- 10:30 COHEN, Y.; PURUCKER, M.  
Introducing long wavelenthes in global magnetization models to delineate age provinces (Poster)
- 10:35 DANCKWARDT, E.; JACOBS, F.  
A rapid method on three-dimensional electrical resistivity (Poster)
- 10:40 RITTER, S.  
On integral operators of potential theory and its applications (Poster)
- 10:45 AKYOL, N.; PINAR, R.  
Analysis of gravity data with 3-D Hilbert transformation (Poster)



- 10:50 ANKAYA, O.; AKDEMIR, Ö.; AKCIG, Z.; PINAR, R.  
Application of the Hilbert transform and power spectra in the potential fields (Poster)
- 10:55 SMILDE, P.L.  
Non-linear gravity inversion incorporating both density and geometric parameters (Poster)
- 11:00 BILIARSKA, R.; ZHELEV, ZH.; BILIARSKA, I.  
On the solution of the inverse problems of potential fields with an optimal orthogonal prism (Poster)
- 11:05 PINTO, V.; RIVERO, L.; CASAS, A.  
An interactive 2D and 3D gravity modelling programme for personal computers (Poster)

#### Geological and tectonic problems, isostasy, case histories

- 11:10 MARSON, I.; PANZA, G.; VELICOGNA, I.  
Gravity and geoid data for the validation of a 3-D structural model of European region
- 11:25 JAHR, TH.; JENTZSCH, G.; GABRIEL, G.; MELZER, J.  
Gravity and geodynamic investigations of the Harz mountains/Germany from 1991 to 1997
- 11:40 LUNCH
- 12:00 Business Meetings

Chairperson: N.N.

- 14:00 KOUTINOV, I.G.; TCHISTOVA, Z.B.  
Potential fields - important indicators of geodynamic setting of ancient structures of Earth's crust?
- 14:15 GUDMUNDSSON, M.T.  
The structure and thermal state of active volcanic centres in Iceland studied with gravity and magnetics
- 14:30 RYZHYI, B.P.; BELLAVIN, O.V.; NACHAPKIN, N.I.  
About connection of mantle and crust in lithosphere of the Urals
- 14:45 WANG, Z.  
The crustal structure and the geoid in the Fennoscandian Shield
- 15:00 ABOU HELEKIA, M.M.; MAURITSCH, H.J.; SETTO, I.; SENDLHOFFER, G.P.; EL-SHEMI, A.M.  
Delineation of sedimentary basins and crustal thickness in El Minia - Assiut area, Egypt by using 3-D gravity and 2.5-D magnetic modelling
- 15:15 EL ERAKI, M.  
Depocenters in north Egypt approved from potential field data
- 15:30 RABAE, A.M.; ABUHAJAR, M.I.  
The geological interpretation of a magnetic anomaly in the continental shelf of NW offshore Libya
- 15:45 BESUTIU, L.; NICOLESCU, A.; CRISTEA, P.; STANCHEVICI, B.  
Combined geophysical research within north Dobrogea Orogene, Romania
- 16:00 MLADENOVIC, M.; SMILJANIC, N.  
Study of ultramafic belts in inner Dinarides and Vardar zone (Poster)
- 16:05 KUBLER, L.; BERGMAN, S.; MARTINSSON, O.  
A synthesis of the geology and geophysics of the northern Norrbotten ore province, Sweden (Poster)
- 16:10 RUOTOISTENMAKI, T.  
Midnorden project, geophysics sub-project: combined geophysical maps of Central and Northern Fennoscandia and their applications in ore prospecting and tectonic analysis (Poster)

- 16:15 O'REILLY, B.M.; READMAN, P.W.; MURPHY, T.  
Gravity patterns and carboniferous base-metal ore deposits in Ireland (Poster)
- 16:20 REEH, G.A.; HASSAN, H.  
Geophysical investigations into the deep structure of Mamoura area, offshore Libya (Poster)
- 16:25 KAMINSKY, V.D.; PISKAREV, A.L.; POSELOV, V.A.  
The Earth crust structure in the continent-ocean transition zone according to potential field data interpretation in Arctic (Poster)
- 16:30 MRLINA, J.; SPICAK, A.  
Changes of gravity in relation to other geodynamic phenomena in western Bohemia (Poster)
- 16:35 END OF SESSION

#### **SE37 Regional magnetic surveys: data, models and charts - Poster Session**

Convener: Best, A.

Co-Convener(s): Chiappini, M.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - SE

Editors: Chiappini, M.; Best, A.

- SE353 KARATAEV, G.; KARAGODINA, O.;  
SE37-016 SAS-UHRYNOWSKI, A.; MROCZEK, S.  
Establishment of magnetic secular variation network in Belarus
- SE354 DEMINA, M.; KASYANENKO, L.G.;  
SE37-017 SAS-UHRYNOWSKI, A.; WELKER, E.  
Magnetic atlas of the Baltic Sea
- SE355 KHARITONOV, A.L.; ODINTSOV, S.D.;  
SE37-018 ROTANOVA, N.M.; TSVETKOV, YU.P.  
Magsat magnetic anomaly fields for Europe and Asia
- SE356 AHMED, F.M.; DEEBES, H.  
SE37-019 Magnetic survey of Ras Gharib area in Egypt for petroleum exploration
- SE357 MIHAJLOVIC, J.S.; POPESKOV, D.;  
SE37-020 OBRADOVIC, M.  
IGFR model and geomagnetic repeat station surveys in Yugoslavia
- SE358 SAILHAC, P.; GALDEANO, A.; GIBERT, D.;  
SE37-021 MOREAU, F.; DELOR, C.  
Magnetic sources characterization in Guyana inferred from aeromagnetic data analysed with continuous wavelets

#### **SE37 Regional magnetic surveys: data, models and charts**

Convener: Best, A.

Co-Convener(s): Chiappini, M.

Friday, 24 April 1998

Lecture Room: R2

Chairperson: Chiappini, M.

Editor: Chiappini, M.

- 08:30 DE SANTIS, A.; TORTA, J.M.  
SE37-001 Ordinary and spherical cap harmonics and an integral matrix-based approach for modelling regional magnetic data (Solicited Paper)

- 09:00 **KORTE, M.; BEST, A.; HAAK, V.**  
SE37-002 Magnetic anomalies and secular variation in central Europe
- 09:15 **ROESER, H.A.; SCHULZ, G.; BEBLO, M.**  
SE37-003 Comparison of observed secular variation with the changes of the IGRF in Germany
- 09:30 **BESUTIU, L.**  
SE37-004 On the normal geomagnetic field (NGF). Modelling and understanding
- 09:45 **ALEXANDRESCU, M.; BERGER, J.; BEST, A.; DUMA, G.; FREDOW, M.; HEJDA, P.; HORACEK, J.; SAS-UHRYNOWSKI, A.; ZOLTOWSKI, Z.**  
SE37-005 Coordinated magnetic repeat station survey in Europe
- 10:00 **ALEXANDRESCU, M.**  
SE37-006 Half-century of magnetic repeat stations measurements in France
- 10:15 **KÖRMENDI, A.; ALEXANDRESCU, M.; LE MOUEL, J.-L.; RASMUSSEN, O.**  
SE37-007 Initial results from analysis of periodic and secular variation by LabVIEW + HiQ
- 10:30 **BREAK**
- Chairperson: Best, A.  
Editor: Best, A.
- 11:00 **WEBERS, W.**  
SE37-008 On determining reference fields from ground-based and satellite field data
- 11:15 **BICSKEI, T.; HASKIC, A.**  
SE37-009 Geomagnetic field on the territory of Yugoslavia for the epoch 1995.5
- 11:30 **ROTANOVA, N.M.; KHARITONOV, A.L.**  
SE37-010 Spectral analysis of the Magsat geomagnetic field
- 11:45 **ROTANOVA, N.M.; TSVETKOV, Y.U.P.**  
SE37-011 Aerostatic surveys of the geomagnetic field at the stratospheric altitudes
- 12:00 **AHMED, F.M.; DEEBES, H.**  
SE37-012 Magnetic survey of the area northwest of El-Quseir-Egypt
- 12:15 **AHMED, F.M.; DEEBES, H.**  
SE37-013 Magnetic survey of wadi Natrun area northwest of Cairo - Egypt
- 12:30 **WOLDETINSAE, G.; RAM BABU, H.V.**  
SE37-014 Aeromagnetic study near Gadawara area, and its implication in the Narmada-Son Lineament (NSL), India
- 12:45 **GREEN, A.W.; HEGYMEGLI, L.; KÖRMENDI, A.; PANKRATZ, L.W.; SAUTER, E.A.**  
SE37-015 A fast delta "I" delta "D" system for measurement of geomagnetic elements
- 13:00 **KOREPANOV, V.; KLYMOVYCH, E.**  
SE37-022 Data quality of regional magnetic survey
- 13:15 **END OF SESSION**

## SE38 Long term global geophysical data products from remote sensing

Convener: Arino, O.  
Co-Convener(s): Kerr, Y.H.  
**Thursday, 23 April 1998**  
Lecture Room: R1  
Chairperson: Kerr, Y.H.  
Editors: Kerr, Y.H.; Arino, O.

- 14:00 **BUONGIORNO, A.; ARINO, O.; MELINOTTE, J.-M.**  
SE38-001 The "global land 1km AVHRR data set" project: ESA activities in data collection, processing and distribution
- 14:15 **KERR, Y.H.; GUILLOU, C.; LAGOUARDE, J.P.; NERRY, F.; OTTLE, C.; ARINO, O.**  
SE38-002 Global land surface temperature retrieval from NOAA AVHRR data
- 14:30 **ARINO, O.; MELINOTTE, J.-M.; BUONGIORNO, A.**  
SE38-003 World Fire Atlas with AVHRR and ATSR data
- 14:45 **SOBRINO, J.A.; RAISSOUNI, N.**  
SE38-004 Methods for land cover dynamics monitoring using the global land 1-km project AVHRR data. Application to Morocco
- 15:00 **ACHARD, F.; MAYAUX, P.; EVA, H.; JANVIER, P.**  
SE38-005 Production of tropical forest distribution maps using remote sensing data at a global scale
- 15:15 **BERTHELOT, B.; KERGOAT, L.; CABOT, F.; DEDIEU, G.; MAISONGRANDE, P.**  
SE38-006 LASUR: the land surface reflectance data for 1989-1990
- 15:30 **WEISS, M.; BARET, F.**  
SE38-007 What are the canopy biophysical variables that can be estimated from large swath satellite data?
- 15:45 **CALADO, T.J.; DACAMARA, C.C.; CORTE-REAL, J.**  
SE38-008 An operational scheme for cloud classification over land using METEOSAT imagery
- 16:00 **RIGOLLIER, C.; WALD, L.**  
SE38-009 Mapping solar radiation from Meteosat images with the improved Heliosat method
- 16:15 **END OF SESSION**

## SE39 Physical properties of geomaterials .1 Open session on physical properties of geomaterials - Poster Session

Convener: Urai, J.L.  
Co-Convener(s): Huenges, E.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: RHODES - SE

- SE377 **MAJ, S.**  
Electronic properties of minerals related to the Earth's lower mantle
- SE378 **KOHLBECK, F.; SZARKA, L.; WESZTERGOM, V.; JELINOWSKA, A.; MENVIELLE, M.; TUCHOLKA, P.; SCHOTT, J.J.**  
Limitations in identification of lake sediment layers by using precise geoelectric soundings

### Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00, Lecture Room R10

- SE379 **TRICIO, V.**; VILORIA, R.; RODRIGUEZ, L.; GONZALEZ, I.  
Comparative values for environmental parameters in a historical building
- SE380 **GLIKO, A.O.**; PARSEGOV, D.V.; VANYAN, L.L.  
Modelling transport properties of crustal rocks during prograde metamorphic events
- SE381 **TENTLER, T.**; MULUGETA, G.  
Stile of buckles in analogue "rocks" with different rheologies
- SE382 **STORELVMO, L.**; JELMERT, T.A.; MIDDLETON, M.F.  
Numerical simulation of the tidal effect
- SE383 **DIAUR, N.I.**  
Variation in elastic anisotropy in rocks deformed under high pressure and uniaxial compression
- SE384 **KULENKAMPPF, J.**; JUST, A.; FLECHSIG, C.; JACOBS, F.  
Measurements of diffusion in unconsolidated clays with the aid of resistivity tomography
- SE385 **BOS, B.**; SPIERS, C.J.; PEACH, C.J.  
Influence of chemically active fluids on fault slip
- SE386 **BOUROVA, E.**; PARKER, S.C.; RICHET, P.  
Atomistic simulation of quartz and cristobalite at high temperature
- SE387 **TATARINOV, V.N.**  
The dynamics of spatial - temporal variations of physical fields and structure in rocks massifs
- SE388 **DIETRICH, M.**; MARQUIS, G.; STOPIN, A.; CHAFFARD, V.; GARAMBOIS, S.; GUIGUET, R.; BARSUKOV, P.  
Geophysical investigations of the Cléry fault, Vercors, France
- SE389 **ITO, H.**; FUJIMOTO, K.; OHTANI, T.; TANAKA, H.; HIGUCHI, T.; TOMIDA, N.; AGAR, S.M.  
Alteration and mass transfer along the GSJ borehole penetrating the Nojima earthquake fault
- SE390 **STEWART, M.**; HOLDSWORTH, R.E.; IMBER, J.  
Weakening processes within continental fault zones
- SE391 **SPIEGELBERG, H.**; STORZ, W.; FLECHSIG, CH.; JACOBS, F.  
DC-geoelectrical deep soundings in combination with modern inversion technologies: a tool to investigate geological structures
- SE391A **KIREENKOVA, S.M.**; EFIMOVA, G.A.  
The anomalous changes of the physical parameters of clinopyroxenes at high pressures
- SE391B **EFIMOVA, G.A.**; KIREENKOVA, S.M.  
Informativity of microstructural investigations of rocks under high PT-conditions for study of processes of earthquakes preparation
- SE391C **VLASOV, Y.T.**; INGEROV, A.I.; KUSCH, O.  
Electromagnetic techniques for fault zones mapping

## SE39 Physical properties of geomaterials .2 Imaging, analysing and modelling pore structure in geomaterials

Convener: David, C.

Co-Convener(s): Olgaard, D.L.; Rodriguez Rey, A.

**Thursday, 23 April 1998**

Lecture Room: R11

Chairperson: Anselmetti, F.

Editors: David, C.; Olgaard, D.L.; Rodriguez Rey, A.

09:00 **FREDRICH, J.T.**

SE39.2- 3D imaging of porous media and application to  
001 microscale modelling of transport properties (Solicited Paper)

09:30 **DAVIDSON, G.**; **PETFORD, N.**; **MILLER, J.A.**

SE39.2- Visualisation of pore structure geometry using  
002 confocal scanning laser microscopy

09:45 **THOVERT, J.-F.**; **SPANNE, P.**; **JACQUIN, C.G.**;

SE39.2- **ADLER, P.M.**

003 Multiscale characterization of the geometrical and transport properties of a Fontainebleau sandstone from microtomographic imaging

10:00 **GOEBBELS, J.**; **HELLMUTH, K.-H.**; **KLOBES, P.**; **MEYER, K.**; **SIITARI-KAUPPI, M.**

SE39.2- Imaging and analyzing rock porosity by autoradiography and HG-porosimetry/computertomography  
004

10:15 **ZANG, A.**; **WAGNER, F.C.**; **STANCHITS, S.**;

SE39.2- **DRESEN, G.**

005 Fracture source mapping in deformed granite by advanced acoustic emission and X-ray tomography

10:30 **MONTEMAGNO, C.D.**; **PYRAK-NOLTE, L.J.**

SE39.2- Fracture network versus single fractures: measurement of fracture geometry with X-ray tomography  
006

10:45 **BREAK**

Chairperson: Rodriguez Rey, A.

Editors: David, C.; Olgaard, D.L.; Rodriguez Rey, A.

11:15 **EHRlich, R.**

SE39.2- Strong relationships between image data and sandstone physical properties (Solicited Paper)  
007

11:45 **BELIN, S.**; **ANGUY, Y.**; **BERNARD, D.**; **FERM, J.B.**; **FRITZ, B.**

SE39.2- Modelling physical properties of sandstone reservoirs by blending 2D image analysis data with 3D capillary pressure data  
008

12:00 **ANGUY, Y.**; **BERNARD, D.**

SE39.2- Is it possible to characterize the geometry of a real porous medium by a direct measurement on a finite section?  
009

12:15 **ANSELMETTI, F.S.**; **LUTHI, S.**; **EBERLI, G.P.**

SE39.2- Quantitative characterization of carbonate pore systems by digital image analysis  
010

12:30 **LUNCH**

Chairperson: Olgaard, D.L.

Editors: David, C.; Olgaard, D.L.; Rodriguez Rey, A.

14:00 **SOLYMAR, M.**

SE39.2- Image analysis, and estimation of porosity and permeability of Arnager Greensand, upper Cretaceous, Denmark  
011

14:15 **LINDQUIST, W.B.**

SE39.2- Investigating three dimensional geometry of porous media from high resolution images  
012

---

**Attend the Poster Session**

---

- 14:30 **SAMMARTINO, S.**; PATRIER, P.; SARDINI, P.;  
SE39.2- MEUNIER, A.; TEVISSSEN, E.  
013 Alteration influence on microporosity connectivity of  
Charroux-Civray tonalite  
14:45 **HROUDA, F.**; HANAK, J.; TERZIJSKI, I.  
SE39.2- Pore fabrics of ceramic models investigated by  
014 magnetic anisotropy  
15:00 **O'CONNOR, R.M.**; FREDRICH, J.T.;  
SE39.2- STOCKMAN, H.W.  
015 Microscale flow modelling in geologic materials  
15:15 **DU PLESSIS, J.P.**  
SE39.2- Introducing a percolation threshold in pore-scale  
016 modelling  
15:30 **SARDINI, P.**; SAMMARTINO, S.; MOREAU, E.  
SE39.2- Simulation of 2D granite crack systems from image  
017 analysis and stereological data  
15:45 **ZIMMERMANN, G.**; BURKHARDT, H.  
SE39.2- Fluid pathways in crystalline rock  
018  
16:00 **LADD, A.F.**; **BLAIR, S.**  
SE39.2- 3-D deformation analysis based on high resolution  
019 X-ray tomographs  
16:15 END OF SESSION

### SE39 Physical properties of geomaterials .2 Imaging, analysing and modelling pore structure in geomaterials - Poster Session

Convener: David, C.  
Co-Convener(s): Olgaard, D.L.; Rodriguez Rey, A.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Thursday, 17:00 - 19:00  
Poster Area: RHODES - SE  
Chairperson: Zang, A.H.  
Editors: David, C.; Olgaard, D.L.; Rodriguez Rey, A.

- SE392 **MENENDEZ, B.**; **DAVID, C.**; DAROT, M.  
SE39.2-020 Laser confocal microscopy study of the 3-D  
crack network of mechanically and thermally  
deformed granite samples  
SE393 **RAYNAUD, S.**; DESRUES, J.; GURAUD, Y.;  
SE39.2-021 MAZEROLLE, F.; TILLARD, D.  
Evidence of the material nature influence on the  
brittle rupture style  
SE394 **RUIZ DE ARGANDO, V.G.**; **RODRIGUEZ**  
SE39.2-022 **REY, A.**; CELORIO, C.; CALLEJA, L.;  
SUAREZ DEL RIO, L.M.; LLAVONA, J.  
Characterization by computed X-ray tomography  
of the evolution of the pore structure of a  
dolomitic rock during freezing-thawing ageing  
tests  
SE395 **DAROT, M.**; MENENDEZ, B.; BERNARD,  
SE39.2-023 J.-D.  
Infinite cluster imaging: experimental aspects of  
wood's metal intrusion in Fontainebleau sand-  
stones  
SE396 **MENENDEZ, B.**; RODRIGUEZ-REY, A.;  
SE39.2-024 MONTOTO, M.  
Estimation of pore geometry parameters in rocks  
from single sections by stereology  
SE397 **MOREAU, E.**; SAMMARTINO, S.;  
SE39.2-025 TOUCHARD, G.  
2D and 3D geometry of soils: pore size distribu-  
tion and percolation paths

- SE398 **DUBOIS, C.**; GAVIGLIO, P.; THEMIER, F.;  
SE39.2-026 POINTEAU, I.  
2D/3D characterization of a natural porous  
medium: the chalk  
SE399 **SAUSSE, J.**; LESPINASSE, M.; CANALS, M.  
SE39.2-027 Micro and macrofractures planes roughness.  
Evidences of high chenalizatioons of fluids and  
consequences on fluid-rock interactions  
SE400 **CARRIO SCHAFFHAUSER, E.**; GAMOND,  
SE39.2-028 J.F.; HENRIOT, O.; CHAMILLET, J.  
The grain scale localisation processes: experi-  
mental study on lacustrine clays  
SE401 **DELERUE, J.F.**; YU, Z.Y.; MA, S.D.;  
SE39.2-029 PERRIER, E.  
A new method of skeleton extraction and appli-  
cation for 3D soil images

### SE39 Physical properties of geomaterials .3 The effect of rock micro-structure and fluids on rock physical proper- ties - Poster Session

Convener: Glover, P.W.J.  
Co-Convener(s): Huenges, E.; Main, I.; Safanda, J.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Thursday, 17:00 - 19:00  
Poster Area: RHODES - SE

- SE402 **RUSINIAC, L.**  
Spontaneous polarization of water in a porous  
solid body  
SE403 **ZAPPONE, A.**; KHAZANEHDARI, J.;  
RUTTER, E.; BURLINI, L.  
Seismic laboratory measurements of Vp and Vs  
on rocks with granitic composition  
SE404 **LOPES, I.**; ALMEIDA, T.; MARQUES, F.;  
TEVES-COSTA, P.  
Mechanical behaviour of miocene soft rocks and  
their micro-structure  
SE405 **CHERNOVA, I.Y.**; **SIDOROVA, N.N.**  
Petrophysical properties of sandstone in facies  
and palaeotectonic reconstructions  
SE405A **PRIBNOW, D.**; WILLIAMS, C.; DUYSSTER, J.;  
SASS, J.  
The effect of water-saturation on thermal conduc-  
tivity

### SE39 Physical properties of geomaterials .3 The effect of rock micro-structure and fluids on rock physical proper- ties

Convener: Glover, P.W.J.  
Co-Convener(s): Huenges, E.; Main, I.; Safanda, J.  
**Friday, 24 April 1998**  
Lecture Room: R11  
Chairperson: Glover, P.W.J.

- 09:00 **WONG, T.-F.**  
Effects of stress on permeability (Solicited Paper)  
09:30 **BERNARD, D.**; VIGNOLES, G.; ANGUY, Y.  
Coupled evolutions of micro-geometry and transport  
properties: a numerical study for simple porous  
media

09:45 **GLOVER, P.W.J.**; MATSUKI, K.; HIKIMA, R.; HAYASHI, K.

Synthetic rough fractures in rocks for flow modelling

10:00 **GLOVER, P.W.J.**; MATSUKI, K.; HIKIMA, R.; HAYASHI, K.

Fluid flow in synthetic rough fractures and applications to a field scale fracture

10:15 **OGILVIE, S.**

The influence of fluorite and barite cementation on porosity and permeability in reservoir and reservoir analogue sandstones

10:30 **BREAK**

Chairperson: Main, I.

11:00 **CLAVAUD, J.-B.**; ZAMORA, M.

Transport properties of sedimentary and volcanic rocks

11:15 **MERCET, C.**; BERNARD, D.; ANGUY, Y.

Effects of surface conductivity on formation factor: a numerical study for simple porous media

11:30 **BERNARD, M.L.**; ZAMORA, M.; GERAUD, Y.

Electrical and hydraulic properties of pyroclastic rocks and their relations to microstructure

11:45 **BÄCHLE, G.**; GLOVER, P.

Pore structure and transport in a pure sandstone - determination of relevant properties

12:00 **PAPE, H.**; CLAUSER, C.; BARTELS, J.

Permeability-porosity relationship for sedimentary, igneous and metamorphic rocks on the base of fractal pore space geometry

12:15 **CORAZZA, M.**; LOSITO, G.; PRATESI, G.; TROVA, A.

Critical size of crystallites in electrical conductivity of graphitic rocks

12:30 **WEERTS, A.H.**; BOUTEN, W.

Simultaneous measurement of water retention and electrical conductivity: test of a tortuosity model

12:45 **KULENKAMPFF, J.**

Complete pore size distributions of rocks controlling complex electrical and transport properties

13:00 **LUNCH**

Chairperson: Huenges, E.

14:00 **ZAMORA, M.**; CATTIN, R.

Effect of pore geometry on thermal properties of sedimentary rocks

14:15 **PRIBNOW, D.**; WILLIAMS, C.; DUYSER, J.; SASS, J.

The effect of water-saturation on thermal conductivity (Poster)

14:20 **KOHL, T.**; RYBACH, L.

Estimating fluid flow behaviour in mid-crustal depth domains

14:35 **WULFF, A.-M.**

Variation of wave attenuation in different dry rocks during micro fracturing

14:50 **MITROFANOV, G.**; NEFEDKINA, T.

Seismic dynamic inversion using compressional and converted waves

15:05 **KERN, H.**; POPP, T.

P- and S-wave velocities and attenuation in relevant crustal rocks at PT conditions and the role of intercrystalline fluids

15:20 **BREAK**

Chairperson: Safanda, J.

16:00 **TOMECKA-SUCHON, S.**; MARCAK, H.

Investigation on physical properties of fractured rock by geophysical methods

16:15 **RUSINIAK, L.**

Spontaneous polarization of water in a porous solid body (Poster)

16:20 **ZAPPONE, A.**; KHAZANEHDARI, J.; RUTTER, E.; BURLINI, L.

Seismic laboratory measurements of Vp and Vs on rocks with granitic composition (Poster)

16:25 **LOPES, I.**; ALMEIDA, T.; MARQUES, F.; TEVES-COSTA, P.

Mechanical behaviour of miocene soft rocks and their micro-structure (Poster)

16:30 **CHERNOVA, I.Y.**; SIDOROVA, N.N.

Petrophysical properties of sandstone in facies and palaeotectonic reconstructions (Poster)

16:35 **FÖRSTER, A.**; DOVETON, J.H.; MERRIAM, D.F.; BLACKWELL, D.D.

In situ thermal conductivity and its importance for heat-flow studies: an example from a sedimentary environment

16:50 **POPP, T.**; KERN, H.

How dilatant is rock salt?

17:05 **GLOVER, P.W.J.**

Summary of session

17:30 **END OF SESSION**

### **SE39 Physical properties of geomaterials .4 Pore pressure as a geomechanical and geophysical parameter**

Convener: Kümpel, H.-J.

Co-Convener(s): Grasso, J.-R.

**Wednesday, 22 April 1998**

Lecture Room: R11

Chairpersons: Grasso, J.-R.; Kümpel, H.-J.

14:00 **GRECKSCH, G.**; KÜMPEL, H.-J.

Deformation field and pore pressure changes following the M5.9 Roermond-Earthquake

14:15 **KÜMPEL, H.-J.**; GUPTA, H.K.;

RADHAKRISHNA, I.; CHADHA, R.K.;

GRECKSCH, G.

Studying the role of pore pressure in a RIS case

14:30 **KESSELS, W.**; ZOTH, G.

Determination of hydraulic conductivity and subsidence volume from water level measurements during blasting operations

14:45 **AUDIGANE, P.**; ROYER, J.J.; SHAPIRO, S.

3D permeability tensor estimation from microseismic data

15:00 **SCHULZE, K.C.**; KÜMPEL, H.-J.; HUENGES, E.

Pore pressure signals from great depth: continuous fluid level records from the KTB, Kola SG-3 and Iceland LL-03 boreholes

15:15 **REVIL, A.**; CATHELS, L.M.; PEZARD, P.A.

Fluid overpressures in western Mediterranean sediments

15:30 **PEREZ, L.**; BERNARDI, D.; JIMENEZ, O.

Modelling of compaction in faulted sedimentary basins: influence of different mechanical models on fluid pressure

- 15:45 **BOUCHETTE, F.; SEURET, M.; MOUSSINE-POUCHKINE, A.**  
Brecciation of a weakly cohesive carbonate mud by wave-induced liquefaction
- 16:00 **CHERNIAVSKI, V.; SUETNOVA, E.**  
Natural porosity evolution in the Earth crust: time scale and influence of boundary conditions
- 16:15 **END OF SUB-SESSION**

### **SE39 Physical properties of geomaterials .5 Physical properties of partially molten rocks**

Convener: Dell'Angelo, L.N.  
Co-Convener(s): Rosenberg, C.

**Wednesday, 22 April 1998**

Lecture Room: R11

Chairpersons: Rosenberg, C.; Dell'Angelo, L.N.

- 08:40 Introduction
- 08:45 **LAPORTE, D.; PROVOST, A.; RIGNAULT, E.**  
Dihedral angles and melt interconnection in partially molten crust: theory and experiments
- 09:00 **VIGNERESSE, J.L.; TIKOFF, B.**  
Strain partitioning and percolation effects on the rheology of partial melt and crystallizing magma
- 09:15 **BROWN, M.; SOLAR, G.S.**  
Melt extraction and transport during deformation
- 09:30 **BRUHN, D.; ZIMMERMAN, M.E.; KOHLSTEDT, D.L.**  
Deformation of partially molten mantle rocks at high stresses
- 09:45 **GROEBNER, N.; BRUHN, D.; KOHLSTEDT, D.L.**  
Topology of metal melts in olivine aggregates deformed to high shear strain
- 10:00 **MUELLER, H.J.; KERN, H.; RAAB, S.; POPP, T.; ROETZLER, K.**  
Elastic properties of granite under high pressure-high temperature conditions up to partial melting
- 10:15 **GALLO, J.; KRUHL, J.H.**  
Magmatic deformation during melt ascent in a developing ring complex (the Larvik Pluton, Norway)
- 10:30 **ROSENBERG, C.L.; RILLER, U.**  
Melt popology in naturally deformed granitoid rocks
- 10:45 **SAWYER, W.**  
Microstructural evidence for melt in magmatitese
- 11:00 **BERGER, A.**  
Microstructures in cordierite-bearing migmatites: inferences for melt segregation
- 11:15 **DARROZES, J.; GAILLOT, P.; TIKOFF, B.**  
Strain and fabric analyses on porphyroclast interaction
- 11:30 **GAILLOT, P.; DARROZES, J.; GREGOIRE, V.**  
Fabric image analysis tools for polyphased rocks: a comparative study
- 11:45 **END OF SUB-SESSION**
- 12:00 Business Meetings

### **SE39 Physical properties of geomaterials .6 Physical properties of mudrocks**

Convener: Horseman, S.T.

Co-Convener(s): Urai, J.L.

**Tuesday, 21 April 1998**

Lecture Room: R11

Chairperson: N.N.

- 11:00 **THURY, M.; GAUTSCHI, A.**  
The Mont Terri underground rock laboratory; a new international research project in shale
- 11:20 **ALONSO, E.E.; GENS, A.; LLORET, A.**  
Time dependent swelling of mudrocks (Solicited Paper)
- 11:50 **HARRINGTON, J.F.; HORSEMAN, S.T.**  
Chemico-osmotic flow, swelling and hydration in shales
- 12:10 **SOLER, J.M.**  
Coupled transport phenomena in the Opalinus Clay (Switzerland): first estimates of solute fluxes
- 12:30 **BILLIOTTE, J.; BOISSON, J.Y.; DAUPLEY, X.**  
Some aspects of relationships between hydric and mechanical properties of an argillaceous rock
- 12:50 **LUNCH**
- Chairperson: N.N.
- 14:00 **TEVISSSEN, E.; HARMAND, B.; GRIFFAULT, L.; VITART, X.; CAVE, M.**  
Characterisation of anion diffusion in a siltite formation (Marcoule, France): through-diffusion experiments and interpretation of in-situ chloride and bromide profiles
- 14:20 **GRIBI, P.; RIVERA, A.; SCHNEIDER, J.; ZUIDEMA, P.**  
Consolidation-induced radionuclide release from a HLW repository in the Opalinus clay in Switzerland
- 14:40 **CARTWRIGHT, J.A.; DEWHURST, D.N.**  
Compaction by syneresis: a mechanism for the development of polygonal fault systems in ultra fine-grained sediments
- 15:00 **KOSTYRYA, V.YA.; AGAFONOV, A.V.**  
Local offloading of the outburst-hazardous coal seams by the preparational workings
- 15:20 **GALLE, C.**  
Behaviour of compacted clay under high gas pressure
- 15:40 **HARRINGTON, J.F.; HOOKER, P.J.; HORSEMAN, S.T.**  
An in situ gas injection experiment in the Mercia mudstone, Keyworth, England
- 16:00 **HERBERT, H.-J.; MOOG, H.**  
Ion exchange, water uptake, swelling and swelling pressure of MX-80 bentonite in high saline brines
- 16:20 **END OF SUB-SESSION**

SE

**SE39 Physical properties of geomaterials**  
**.6 Physical properties of mudrocks -**  
**Poster Session**

Convener: Horseman, S.T.

Co-Convener(s): Urai, J.L.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Wednesday, 17:00 - 19:00**

Poster Area: RHODES - SE

- SE406 **CAVE, M.**; GRIFFAULT, L.; REEDER, S.  
The extraction and characterisation of pore-water from lower permeability argillaceous rock samples
- SE407 **TAKAHASHI, M.**; SHIMAMOTO, T.  
Velocity dependent behaviour of clay gouge
- SE408 **VAN DER ZEE, W.**; URAI, J.L.  
Clay injection into normal faults: first results from finite element modelling
- SE409 **ALEXEEV, A.D.**; BRYUKHANOV, A.M.; KERKEZ, S.D.; PITALENKO, E.I.; REVVA, V.N.; SNISHKO, V.D.  
Physical and mechanical properties of coal and their influence on the geophysical parameters of rock mass
- SE410 **HOLVOET, F.-X.**; VOLCKAERT, G.; BERNIER, F.; ORTIZ, L.  
Controlled suction oedometric tests on Boom clay

**SE41 Electro-magnetic and electro-kinetic properties of rocks: integration of laboratory, borehole and field measurements**

Convener: Glover, P.W.J.

Co-Convener(s): Revil, A.; Stoll, J.B.

**Monday, 20 April 1998**

Lecture Room: R8

Chairperson: Glover, P.W.J.

Editor: Stoll, J.B.

- 11:00 **JOUNIAUX, L.**; BERNARD, M.L.  
SE41-001 Streaming potential measurements on volcanic samples (Solicited Paper)
- 11:30 **REVIL, A.**; PEZARD, P.A.; GLOVER, P.W.J.  
SE41-002 Streaming electrical potential in porous media. Theory and geothermal application
- 11:45 **PREISS, S.**; TIMM, F.; CZEGKA, W.; HUENGES, E.; MÖLLER, P.  
SE41-003 Electrokinetically induced fluid flow in porous media
- 12:00 **COELHO, D.**; THOVERT, J.-F.; ADLER, P.M.  
SE41-004 Electroosmotic phenomena in porous media
- 12:15 **LORNE, B.**; PERRIER, F.; AVOUAC, J.-P.  
SE41-005 Streaming potential measurements with crushed rock samples and rock samples during deformation and rupture
- 12:30 LUNCH

Chairpersons: Revil, A.; Stoll, J.B.

Editor: Glover, P.W.J.; Revil, A.

- 14:00 **CLINT, O.C.**; SAMMONDS, P.R.; YOSHIDA, S.;  
SE41-006 **MEREDITH, P.G.**  
Electrical potential signals from rocks undergoing deformation under simulated crustal conditions

- 14:15 **POZZI, J.P.**; JOUNIAUX, L.

SE41-007 Streaming potential measurement as a precursor to failure

- 14:30 **GARAMBOIS, S.**; DIETRICH, M.

SE41-008 Seismo-electric propagation in porous media: field experiments and theoretical studies

- 14:45 **PERRIER, F.**; TRIQUE, M.; LORNE, B. AVOUAC, J.-P.; HAUTOT, S.; TARITS, P.

SE41-009 Electric potential variations associated with yearly lake level variations

- 15:00 **NEISHTADT, N.M.**

SE41-010 On the piezoelectric properties of rocks, ores and minerals

- 15:15 **NEISHTADT, N.M.**

SE41-011 Classification of Piezo- and electrokinetic phenomena

- 15:30 **BOULYTCHOV, A.**; KOKSHAROV, V.

SE41-012 Method of seismic-electric effect used on reflected waves

- 15:45 **SMILJANIC, N.**; MILIVOJEVIC, M.; SCHNEGG, P.-A.; MARTINOVIC, M.

SE41-013 The electrical conductivity of the crust in Macva area (Serbia) and their connections with tonalite and metamorphic rocks

- 16:00 **MARTINELLI, G.**

SE41-014 The possible joint appearance of pre-seismic geochemical and geoelectrical anomalies in tectonically active areas (Poster)

- 16:05 **BIGALKE, J.**; JUNG, A.

SE41-015 Application of the nonlinear IP effect to detect mineralized shear zones (Poster)

- 16:10 **KOPPAN, A.**; SZARKA, L.; WESTZTERGOM, V.

SE41-016 Conclusions from multichannel electrical recordings in a standing tree (Poster)

- 16:15 **INGEROV, A.I.**; BELYAVSKY, V.V.;

SE41-017 **ANTSIFIROV, A.V.**; VLASOV, Y.T.; SOLDATENKO, V.P.; ROKITYANSKY, I.I.  
Results of field, borehole and laboratory electromagnetic measurements in an oil-gas deposit in northern Ukraine (Poster)

- 16:20 **GLOVER, P.W.J.**

Summary of session

- 16:30 END OF SESSION

- 17:00 Opening

- 19:30 Reception

**SE41 Electro-magnetic and electro-kinetic properties of rocks: integration of laboratory, borehole and field measurements - Poster Session**

Convener: Glover, P.W.J.

Co-Convener(s): Revil, A.; Stoll, J.B.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: RHODES - SE

- SE411 **MARTINELLI, G.**

SE41-014 The possible joint appearance of pre-seismic geochemical and geoelectrical anomalies in tectonically active areas

- SE412 **BIGALKE, J.**; JUNG, A.

SE41-015 Application of the nonlinear IP effect to detect mineralized shear zones

- SE413 **KOPPAN, A.; SZARKA, L.; WESTZTERGOM, V.**  
SE41-016 Conclusions from multichannel electrical recordings in a standing tree
- SE414 **INGEROV, A.I.; BELYAVSKY, V.V.; ANTSIFIROV, A.V.; VLASOV, Y.T.; SOLDATENKO, V.P.; ROKITYANSKY, I.I.**  
SE41-017 Results of field, borehole and laboratory electromagnetic measurements in an oil-gas deposit in northern Ukraine (Poster)

## SE42 Physical properties of fault zones

Convener: Willemse, E.J.  
Co-Convener(s): Sanderson, D.J.  
**Tuesday, 21 April 1998**  
Lecture Room: R2  
Chairperson: N.N.

- 14:00 **VAN DER ZEE, W.; URAI, J.L.**  
Quasi-static mechanical properties of faults
- 14:15 **LANSIGU, C.; RIVES, T.; VAN DEN DRIESCHE, J.; ZELLAGUI, R.**  
Brittle-ductile transition in normal fault zones: implication for fault sealing
- 14:30 **WIBBERLEY, C.; PETIT, J.-P.; RIVES, T.**  
Normal stress control on cataclastic zone development around neo-ruptured faults
- 14:45 **KAY, M.A.; MAIN, I.G.; NGWENYA, B.T.; ELPHICK, S.C.**  
Physico-chemical fault sealing in gouge rich experimental fault zones: a preliminary study
- 15:00 **ITO, H.; KUWAHARA, Y.; MIYAZAKI, T.; KIGUCHI, T.; FUJIMOTO, K.; OHTANI, T.; TAKANA, H.; HIGUCHI, T.; TOMIDE, N.; AGAR, S.M.; BRIE, A.; YAMAMOTO, H.**  
Structure and physical properties of the Nojima fault from active fault drilling
- 15:15 **PEACOCK, D.C.P.; SANDERSON, D.J.**  
The influence of fault propagation of stress system and layering
- 15:30 **MURRAY, T.A.; RIGOL, E.; GRIFFITHS, P.A.; OSBOURN, R.J.; KAPE, S.J.; JAFFRI, F.**  
The prediction of fault damage zone structures using strain derived from kinematic modelling at a potential radioactive waste repository
- 15:45 **LESPINASSE, M.; CATHELINEAU, M.**  
Fluid pressure in faults and paleostress quantification by the use of fluid inclusion planes (FIP)
- 16:00 **SANDERSON, D.J.; ZHANG, X.**  
Damage and fluid flow around normal faults in multilayered sequences
- 16:15 **KNIFE, R.J.; MCALLISTER, E.; HARRIS, S.D.; JONES, G.; FISHER, Q.J.; ALLIN, N.; CLENNELL, B.; ERNSHAW, J.; EDWARDS, E.; FARMER, A.B.; HENSON, D.; HOUGHTON, J.; JONES, R.; PEACOCK, D.; PORTER, J.R.; ROWE, J.; WHITE, E.**  
Faulting processes, fault rock distribution and the behaviour of fluids in fault zones
- 16:30 **INGEROV, A.I.; ANTSIFIROV, A.I.; BELYAVSKY, V.V.; ROKITYANSKY, I.I.; SOLDATENKO, V.V.; VLASOV, Y.T.; KUSCH, O.**  
Electrical properties of deep faults on the Ukrainian shield and its slopes
- 16:45 **END OF SESSION**

## SE43 Advances in the physical interpretation of electromagnetic soundings - Poster Session

Convener: Marquis, G.  
Co-Convener(s): Perrier, F.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: RHODES - SE

- SE359 **RITTER, O.**  
New processing for magnetotelluric remote reference observations
- SE360 **OETTINGER, G.; LARSEN, J.C.; HAAK, V.**  
Processing of noisy magnetotelluric data with the two source method: an example from the Saxonian Granulite Massif
- SE361 **SZARKA, L.; MENVIELLE, M.**  
Use of non-conventional approach in magnetotellurics
- SE362 **SZARKA, L.; ADAM, A.; MENVIELLE, M.**  
Comparison of tensor decomposition methods on MT data measured in the Pannonian basin
- SE363 **WEAVER, J.T.; AGARWAL, A.K.**  
Investigation of the magnetotelluric tensor invariants and their physical interpretation using a synthetic model
- SE364 **JONES, F.W.; CORREIA, A.**  
Anisotropic and dimensional character of MT results from southern Portugal using Mohr circle analysis
- SE365 **BANKS, R.J.; WRIGHT, D.**  
Telluric analysis of distributed magnetotelluric impedance measurements
- SE366 **VAGIN, S.A.**  
The false conductive anomalies on 1-D interpretation and exception them by following 2-D interpretation
- SE367 **MONTEIRO SANTOS, F.A.; MATIAS, H.; PINA ALMEIDA, E.; MENDES VICTOR, L.**  
3D conductivity structure of a plio-quaternary tectonic basin: the Vilarica basin (NE Portugal)
- SE368 **WECKMANN, U.**  
AMT soundings in Spessart Mountains
- SE369 **SHOLPO, M.E.**  
Conditions providing the effective using of the apparent resistivity for the MT-monitoring of the geodynamical processes
- SE370 **BERNARD, T.; TRESSOLS, F.**  
New approach in 3D VLF-EM data representation: exact location of cavities in karst formations from field survey (Poster + PC demo)

PC Demo: Thursday 17.00-19.00 in the poster area

## Surveys in Geophysics

the EGS journal for the publication of extended and refereed review articles in all disciplines concerning geo- and space sciences.

*Surveys in Geophysics* is published by Kluwer Academic Publishers

SE



## SE44 Can electromagnetic images constrain geophysical interpretation of tectonically active environments?

Convener: Simpson, F.

Co-Convener(s): Manzella, A.; Ritter, P.; Schnegg, P.-A.; Smiljanic, N.

Thursday, 23 April 1998

Lecture Room: R9

Chairperson: Simpson, F.

Editors: Simpson, F.; Manzella, A.; Ritter, P.

08:30 BOERNER, D.E.

SE44-001 Addressing geological non-uniqueness in appraising tectonic constraints provided by EM data (Solicited Paper)

09:00 ECHTERNACHT, F.

SE44-002 The resistivity structure of the active continental margin in northern Chile

09:15 RITTER, O.; MÜLLER, A.; ECHTERNACHT, F.; HAAK, V.; DWIPA, S.; ARSADI, E.; MAHFI, A.; BYRDINA, S.; HOFFMANN-ROTHER, A.

SE44-003 Broadband magnetotelluric data from central Java, Indonesia

09:30 MANZELLA, A.; MACKIE, R.; FIORDELISI, A.

SE44-004 MT survey in the Amiata volcanic area: a combined methodology for defining shallow and deep structures

09:45 MARSELLA, E.; PATELLA, D.; PETRILLO, Z.;

SE44-005 SINISCALCHI, A.

Magnetotelluric profiles in southern Apennines

10:00 DI MAURO, D.; VOLPI, G.; MANZELLA, A.; ZAJA, A.; PRATICELLI, N.; CERV, V.; PECK, J.; DE SANTIS, A.

SE44-006 Preliminary EM investigations of the seismo-active region of northern Bohemia

10:15 TZANIS, A.; MAKROPOULOS, K.

SE44-007 Magnetotellurics and seismotectonics in the analysis of active domains: an essential combination

10:30 BREAK

Chairperson: Ritter, P.

Editors: Simpson, F.; Manzella, A.; Ritter, P.

10:45 BIGALKE, J.; JUNGE, A.

SE44-008 Geoelectrical anomalies and their relevance to tectonic interpretations

11:00 STOLL, J.B.; BAHR, K.; GATZEMEIER, A.

SE44-009 MT- and DC-studies close to the Saxothuringian-Rhenohercynian suture zone

11:15 BAHR, K.

SE44-010 Electrical anisotropy and European stress

11:30 ALPEROVICH, L.; CHAIKOVSKY, I.

SE44-011 On the origin of mechano-electrical effect before an earthquake

### Observations of the electromagnetic field of the Earth in the Alpine-Mediterranean region

11:45 SMILJANIC, N.

SE44-012 The electrical conductivity of the crust and upper mantle in the south east Europe and their tectonic significance

12:00 ROKITYANSKI, I.I.; INGEROV, A.I.

SE44-013 Conductive structure of Ukrainian Carpathians from EM observations

12:15 INGEROV, A.I.; ROKITYANSKI, I.I.; VLASOV, Y.T.

SE44-014 Electrical conductivity of Earth's crust and upper mantle in Crimea

12:30 KOSTYANOV, S.G.

SE44-015 Mathematical modelling of some geoelectrical fields in 3D gradient media

12:45 BICSKEI, T.; HASKIC, A.

SE44-016 An array study of daily magnetic variations in Yugoslavia

13:00 END OF SESSION

## SE44 Can electromagnetic images constrain geophysical interpretation of tectonically active environments? - Poster Session

Convener: Simpson, F.

Co-Convener(s): Manzella, A.; Ritter, P.; Schnegg, P.-A.; Smiljanic, N.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Manzella, A.

Editors: Simpson, F.; Manzella, A.; Ritter, P.

SE371 LEMONNIER, C.; MARQUIS, G.; PERRIER, F.

SE44-017 Electrical structure from the Gangetic plain to the Himalayas

SE372 SIMPSON, F.; HAAK, V.; KHAN, M.A.

SE44-018 Electromagnetic properties of the southern Kenya Rift

SE373 STANICA, M.

SE44-019 Approach of the tectonic active zones (Vrancea area) by MT soundings

SE374 MAGUNIA, A.; SIMPSON, F.; WATERMANN, J.

SE44-020 Audiomagnetotelluric sounding on the Montecristo Island (Italy)

SE375 SIMPSON, F.; BAHR, K.

SE44-021 Resolution of mantle heterogeneities from simultaneous continental and island electromagnetic measurements

SE376 RITTER, P.

SE44-022 3D modelling studies of the connection between magnetic distortion effects in GDS data and the scale length of conductivity anomalies

## SE46 Open session on marine geophysics - Poster Session

Convener: Danobeitia, J.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: RHODES - SE

SE415 POLONIA, A.; BRANCOLINI, G.; TORELLI, L.; RANERO, C.

Mechanisms of subduction accretion along the oblique convergent margin off southernmost Chile

- SE416 **DIAZ-NAVEAS, J.; VON HUENE, R.; KLÄSCHEN, D.; RANERO, C.**  
Sediment subduction/accretion of the Chilean convergent margin between 35° and 40° S
- SE417 **LAURSEN, J.; KLÄSCHEN, D.; RANERO, C.R.; VON HUENE, R.**  
High resolution seismic investigation of the continental margin offshore Valparaiso, Chile
- SE418 **RANERO, C.R.; VON HUENE, R.; FLUEH, E.; DUARTE, M.; BACA, D.**  
Structure of the Sandino Forearc Basin, Pacific margin on Nicaragua
- SE419 **WALTHER, CH.H.E.; FLUEH, E.R.**  
From Cocos to Caribbean Plate - geophysical investigations at the Pacific coast of Nicaragua
- SE420 **STAVENHAGEN, A.U.; FLUEH, E.R.; TICOSECT AND COTCOR WORKING GROUPS**  
TICOSECT/COTCOR: results of wide-angle investigations on and offshore Costa Rica
- SE421 **BARTOLOME, R.; DANOBEITIA, J.J.; CORDOBA, D.; CANALES, J.P.; CARBONELL, R.; DELGADO-ARGOTE, L.A.; ROMERO, M.; CHARVIS, PH.**  
Architecture and crustal evolution across the EPR at 22 N from the southern tip of Baja California to Puerto Vallarta
- SE422 **FLUEH, E.R.; KLAESCHE, D.; KUKOWSKI, N.; ADAM, J.; ORWELL WORKING GROUP**  
Quantifying accretion in the Cascadia subduction zone off Washington
- SE423 **SCHILLHORN, T.; KUKOWSKI, N.; FLÜH, E.R.; MAMUT WORKING GROUP**  
Morphotectonics of the makran accretionary wedge
- SE424 **ALLERTON, S.; SCARLE, R.; ESCARTIN, J.**  
Evidence for asymmetric accretion at the end of a slow spreading segment
- SE425 **RUELLAN, E.; DELTEIL, J.; PELLETIER, A.; KOBAYASHI, K.; MATSUMOTO, T.; WRIGHT, I.; BUFFET, G.**  
Back-arc opening at the transition from the Lau Basin to the Havre Trough (SW Pacific)
- SE426 **POROSHINA, I.; FOUQUET, Y.; CHERKACHEV, G.; PRIEUR, D.**  
Tectonic setting of the Logachev hydrothermal field (MAR, 14°45'N)
- SE427 **SARDOU, O.; RUELLAN, E.; BERTHOD, M.**  
Morphologic analyses of spreading centers by image processing
- SE428 **KISIMOTO, K.; HILDE, T.W.C.**  
Collocated imagery and bathymetry makes the super fast east Pacific rise into stereo view
- SE429 **TAKAHASHI, N.; ABE, S.; MURAKAMI, F.; NISHIZAWA, A.**  
The seismic experiments at the northern end of the Havre Trough
- SE430 **VILLASENOR, A.; CANALES, J.P.; DANOBEITIA, J.J.**  
Crustal structure and magmatic underplating beneath Tahiti, Society Islands
- SE431 **HINZ, K.; NEBEN, S.; REICHERT, C.; DEVEY, C.W.; GOHL, K.; BLOCK, M.; MEYER, H.**  
Isochronous changes in the images of the Cretaceous oceanic crust of the Angola basin/south Atlantic
- SE432 **DEHGHANI, G.A.; HIEKE, W.; SABETIAN, A.; HEINBOCKEL, R.; GROPIUS, M.**  
Geophysical studies in the Mediterranean Sea during Meteor cruise no. 40/1
- SE433 **SCHMIDT, E.; JOKAT, W.**  
Seismic facies and glaciomarine sedimentation in the southern Weddell Sea
- SE434 **WEINREBE, W.; KOPP, C.**  
Submarine morphology imaged by high resolution bathymetry
- SE435 **MCGRANE, K.; READMAN, P.W.; O'REILLY, B.M.; JACOB, A.W.B.; KEARY, R.**  
Gravity and side-scan sonar studies in the rock-all and porcupine troughs, offshore Ireland
- SE436 **MILES, P.R.; SCHAMING, M.; CASAS, A.; SACHPAZI, M.; MARCHETTI, A.**  
SEISCAN - European marine seismic archaeology
- SE437 **ROGENHAGEN, J.; JOKAT, W.**  
Sediment thickness in the western Weddell Sea (Antarctica)
- SE438 **NARDIN, M.; GLANGEAUD, F.**  
Sediment velocity estimation in shallow water configuration
- SE439 **CHMARZYNSKI, P.; JANLE, P.**  
Lithospheric thickness in the region of the St. Helena hot spot from satellite data
- SE440 **THIROT, J.L.; HUMLER, E.; GOSLIN, J.; DOUCELANCE, R.; MONTAGNIER, J.P.**  
Correlations between deep seismic velocity anomalies and isotope ratios of MORB along the mid Atlantic and west and central Indian ridges
- SE440A **ESCARTIN, J.; CANALES, J.P.; DETRICK, R.S.; DANOBEITIA, J.J.**  
Hotspot effects on faulting and tectonic strain along the Galapagos spreading center
- SE47 Structure and composition of oceanic lithosphere**  
**.1 Rifted margins**
- Convener: Reston, T.J.  
Co-Convener(s): Sibuet, J.-C.  
**Tuesday, 21 April 1998**  
Lecture Room: R10  
Chairperson: N.N.
- 08:45 **HINZ, K.; BGR'S MARINE GEOPHYSICAL GROUP**  
Formation of Atlantic volcanic margins and episodes of intensive production of oceanic crust in the Atlantic (Solicited Paper)
- 09:15 **SCHRECKENBERGER, B.; HINZ, K.; NEBEN, S.**  
Seaward-dipping reflector sequences at south Atlantic passive margins and the source of magnetic anomaly G
- 09:35 **DAUTEUIL, O.; QUEMENEUR, F.; HUCHON, P.**  
Rift of Aden Gulf: oblique rifting and transition between continent and ocean lithosphere
- 09:55 **ROLLET, N.; BESLIER, M.O.; CONTRUCCI, I.; DEVERCHERE, J.**  
Conjugate margins of the Ligurian Sea, northwestern Mediterranean: deep structure and evolution
- 10:15 **BREAK**

Chairperson: Whitmarsh, B.

- 10:45 **LARSEN, H.C.; DLC STUDY GROUP**  
The south-east Greenland rifted margin: a record of plume impact and later continental rupture (Solicited Paper)
- 11:15 **DAHL-JENSEN, T.; HOLBROOK, W.S.; HOPPER, J.R.; KORENAGA, J.; LARSEN, H.C.; KELEMEN, P.B.; REID, I.D.; DETRICK, R.; KENT, G.; BERNSTEIN, S.; LIZARRALDE, D.**  
The south-east Greenland volcanic rifted margin
- 11:35 **PLANKE, S.**  
Elastic properties of subaerially emplaced basalts on rifted margins: the importance of clay alteration
- 11:55 **JOKAT, W.**  
Structure and sediment distribution on the north Greenland continental margin and in the Fram Strait north of 80°N
- 12:15 **THINON, I.; FIDALGO, L.; REHAULT, J.P.; OLIVET, J.L.**  
The continent/ocean boundary of Bay of Biscaye
- 12:35 **BOESEN, A.; SKAARUP, N.**  
Onshore-offshore correlation of basaltic facies and related structures, central west Greenland
- 12:40 **BERNDT, C.; SKOGSEID, J.; PLANKE, S.; MJELDE, R.**  
Deep crustal structure of the Voring basin: a comparative sensitivity analysis of OBS and ESP data
- 12:45 **LUNCH**

Chairperson: N.N.

- 14:00 **WHITMARSH, R.B.; ODP LEGS 149/173, DISCOVERY CRUISE 215 SCIENTIFIC PARTIES**  
Review of the ocean-continent transition (OCT) in the southern Iberia abyssal plain, west Iberia margin
- 14:20 **BESLIER, M.O.; WHITMARSH, R.B.; WALLANCE, P.J.; LEG 173 SHIPBOARD SCIENTIFIC PARTY**  
Structure of the 120 km-wide ocean-continent transition of the Iberia Abyssal Plain Margin (Portugal): preliminary results of the ODP Leg 173
- 14:40 **RESTON, T.J.**  
Investigations of continental breakup west of Iberia. New perspectives of rifting and drifting
- 15:00 **RUSSELL, S.M.; WHITMARSH, R.B.**  
Magnetic studies in the Iberia Abyssal Plain: source body characterisation across the ocean continent transition
- 15:20 **LOUDEN, K.E.; CHIAN, D.; MINSHULL, T.A.**  
Seismic images of 3-D variations in the ocean-continent transition off Iberia near ODP Leg 149 and 173 drill sites
- 15:40 **MINSHULL, T.A.; DEAN, S.M.; WHITMARSH, R.B.; RUSSELL, S.M.; LOUDEN, K.E.; CHIAN, D.**  
Seismic velocity structure along profile IAM-9, southern Iberia abyssal plain
- 16:00 **GIRARDEAU, J.; BESLIER, X.; BOILLLOT, G.; CORNEN, G.; SCHARER, U.**  
Structure of the Galicia margin peridotite ridge
- 16:20 **PEREZ-GUSSINYE, M.; RESTON, T.J.; RANERO, C.R.; FLUEH, E.**  
Structure of the Galicia Interior Basin

- 16:25 **DANOBEITIA, J.J.; CORDOBA, D.; DIAZ, J.; BARTOLOME, R.; SALLARES, V.; SANDOVAL, S.; CASERO, N.; ROMERO, M.; SAWYER, D.; ZELT, C.**  
Crustal structure from Galicia interior basin toward the Iberian Massif
- 16:30 **END OF SUB-SESSION**

## **SE47 Structure and composition of oceanic lithosphere**

### **.1 Rifted margins - Poster Session**

Convener: Reston, T.J.

Co-Convener(s): Sibuet, J.-C.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

- SE441 **BOESEN, A.; SKAARUP, N.**  
Onshore-offshore correlation of basaltic facies and related structures, central west Greenland
- SE442 **BERNDT, C.; SKOGSEID, J.; PLANKE, S.; MJELDE, R.**  
Deep crustal structure of the Voring basin: a comparative sensitivity analysis of OBS and ESP data
- SE443 **PEREZ-GUSSINYE, M.; RESTON, T.J.; RANERO, C.R.; FLUEH, E.**  
Structure of the Galicia Interior Basin
- SE444 **DANOBEITIA, J.J.; CORDOBA, D.; DIAZ, J.; BARTOLOME, R.; SALLARES, V.; SANDOVAL, S.; CASERO, N.; ROMERO, M.; SAWYER, D.; ZELT, C.**  
Crustal structure from Galicia interior basin toward the Iberian Massif
- SE445 **DEAN, S.M.; MINSHULL, T.A.; WHITMARSH, R.B.**  
A detachment fault in 3-dimensions?: seismic reflection studies of the H-reflector, north Iberia Abyssal Plain
- SE446 **DEAN, S.M.; MINSHULL, T.A.; WHITMARSH, R.B.; LOUDEN, K.E.; CHIAN, D.**  
Prestack depth-migrated images of detachment faulting: the H-reflector, Iberia abyssal plain

## **SE47 Structure and composition of oceanic lithosphere**

### **.3 Processes of crustal accretion at mid-oceanic-ridges**

Convener: Escartin, J.

Co-Convener(s): Bonatti, E.; Canales, J.P.; Cochran, J.R.; Hekinian, R.

**Wednesday, 22 April 1998**

Lecture Room: R10

Chairperson: N.N.

- 09:00 **COCHRAN, J.R.; WEST, B.P.; SYLVANDER, B.; CHRISTIE, D.M.**  
Rift propagation on the southeast Indian ridge
- 09:15 **CANNAT, M.**  
Crustal thickness, regional axial depth and melting parameters at slow spreading mid-ocean ridges (Solicited Paper)

\* not included in the Book of Abstracts

- 09:45 **ILDEFONSE, B.**; HIRTH, G.; JOHN, B.; TRIMBY, P.; YOSHINOBU, A.; ODP LEG 176 SCIENTIFIC PARTY  
Structural evolution of the lower crust at slow-spreading ridge: preliminary results from ODP LEG 176, site 735B, south west Indian ridge (Solicited Paper)
- 10:15 **HERTOGEN, J.**; ODP LEG 176 SHIPBOARD SCIENTIFIC PARTY  
Accretion of oceanic layer 3 at the very-slow spreading SW Indian Ridge, ocean drilling program hole 735B
- 10:30 **SEARLE, R.C.**; SLOOTWEG, P.; **LEE, S.-M.**; MEVEL, C.; TAMAKI, K.; FUJI SCIENTIFIC PARTY  
Detailed near-bottom sidescan observation of the southwest Indian Ridge
- 10:45 **MULLER, M.R.**; MINSHULL, T.A.; WHITE, R.S.  
Crustal structure and segmentation on the SWIR at 660E
- 11:00 **CANALES, J.P.**; DETRICK, R.S.  
Segment-scale crustal structure variations within the rift mountains of the Mid-Atlantic Ridge (35°N) (Solicited Paper)
- 11:30 LUNCH
- 12:00 Business Meetings
- Chairperson: N.N.
- 14:00 **GOSLIN, J.**; THIROT, J.L.; NOEL, O.; FRANCHETEAU, J.  
Correlations between geophysical and geochemical observables along the mid-Atlantic ridge: slow-ridge/hotspot interactions
- 14:15 **BAZIN, S.**; HARDING, A.J.; ORCUTT, J.A.  
Comparison of crustal structure beneath a robust and a non robust region of the SEPR
- 14:30 **ESCARTIN, J.**  
Abundance of serpentinized peridotite in the lower oceanic crust from seismic velocities
- 14:45 **BONATTI, E.**; LIGI, M.; BORTOLUZZI, G.; CARRARA, G.; FABRETTI, P.; GILOD, D.; PEYVE, A.A.; SKOLOTNEV, S.; TURKO, N.  
Mantle thermal anomalies influence the stability of Bouvet triple junction
- 15:00 **HEBERT, H.**; DEPLUS, C.; DIAMENT, M.; HUCHON, P.; KHANBARI, K.  
Geophysical study of a young spreading ridge and its segmentation: the western Gulf of Aden
- 15:15 **CRAWFORD, W.C.**; WEBB, S.C.; HILDEBRANDT, J.A.  
Comparing crustal melt at the east Pacific rise and the Juan de Fuca ridge
- 15:30 **LALOU, C.**; MÜNCH, U.; HALBACH, P.; REYSS, J.L.  
Different periods of hydrothermal activity at the meso zone, Central Indian Ridge (CIR)
- 15:45 **PROCKTER, L.M.**; HEAD III, J.W.; WILSON, L.; SMITH, D.K.  
Life cycles of axial volcanic ridges: morphological comparisons between the mid-Atlantic ridge and the Reykjanes ridge
- 16:00 **CHERKACHEV, G.**; POROSHINA, I.; CRANE, K.  
Geological setting of the areas of hydrothermal activity on the Knipovich Ridge

- 16:15 **PEZARD, P.A.**; EINAUDI, F.; SCIENTIFIC PARTY OF ODP LEG 174B  
Constraints on high frequency eruption dynamics at MOR's from downhole electrical images
- 16:30 END OF SESSION

## **SE47 Structure and composition of oceanic lithosphere**

### **.4 Collisional and transform plate boundaries and subduction zones**

Convener: Henstock, T.J.  
Co-Convener(s): Ranero, C.R.  
**Monday, 20 April 1998**  
Lecture Room: R9  
Chairperson: Jokat, W.

- 08:45 **ARGNANI, A.**; CIUFFI, S.; LIGI, M.; GASPERINI, L.; BONATTI, E.  
Episodes of contraction and extension along the eastward prolongation of the Romanche fracture zone, central Atlantic Ocean
- 09:00 **MINSHULL, T.A.**; EDWARDS, R.A.; WHITE, R.S.; FLUEH, E.R.; KUKOWSKI, N.; REICHERT, C.; MAMUT WORKING GROUP  
Crustal structure of the Murray Ridge and Dalrymple Trough: lithosphere under oblique extension
- 09:15 **FLUEH, E.R.**; MAMUT WORKING GROUP  
First results of SONNE leg SO 123 - MAMUT
- 09:30 **FECHNER, N.**; BLOCK, M.; DAMM, V.  
Seismic reflection investigations in the northern Arabian Sea off Pakistan during SONNE cruise SO-122 (MAKRAN)
- 09:45 **GUTSCHER, M.-A.**; MALAVIELLE, J.; LALLEMAND, S.; COLLOT, J.-Y.  
Unexplained seismic and volcanic gaps in the N. Andes: Effects of the subduction of Carnegie Ridge?
- 10:00 **FLUEH, E.**; KLAESCHEN, D.; KUKOWSKI, N.; ADAM, J.; ORWELL WORKING GROUP  
Quantifying accretion in the Cascadia subduction zone off Washington (Solicited Paper) \*
- 10:30 END OF SESSION

## **SE48 Gas hydrates in nature: results from geophysical and geochemical studies - Poster Session**

Convener: Pecher, I.A.  
Co-Convener(s): Kukowski, N.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: RHODES - SE

- SE447 **SCHOLL, D.W.**; HART, P.E.  
Geophysical evidence for dense masses of methane hydrate in the deep Bering Sea basin
- SE448 **JAKOBSEN, M.**; MINSHULL, T.A.; SINGH, S.C.; HUDSON, J.A.  
Elastic properties of hydrate-bearing sediments from effective medium theories
- SE449 **HOBRO, J.W.D.**; MINSHULL, T.A.; SINGH, S.C.; SPENCE, G.D.  
Three-dimensional seismic tomographic studies of the methane hydrate stability zone in the Cascadia margin

SE

- SE450 **TINIVELLA, U.**; ACCAINO, F.; LODOLO, E.  
Reflected and refracted seismic images of the BSR in the south Shetland margin (Antarctic Peninsula)
- SE451 **WINTERS, W.**; BOOTH, J.; MASON, D.; PECHER, I.; DILLON, W.; DAVIS, R.; RELLE, M.; CLENNELL, B.  
A laboratory system for creating and testing gas hydrates within sediment
- SE452 BOOTH, J.S.; CLENNELL, B.; PECHER, I.A.; WINTERS, W.J.; RELLE, M.K.; DILLON, W.P.  
Laboratory investigation of gas hydrate genesis in sediments: modes of occurrence, volumes and growth patterns
- SE453 **LORENSON, T.D.**; KVENVOLDEN, K.A.; KASTNER, M.; PAULL, C.K.  
Comparison of gas hydrate composition from the Middle America Trench and Blake Ridge
- SE454 **NASRIFAR, KH.**; **MOSHFEGHLAN, M.**  
Calculating the incipient of hydrate formation temperatures in solutions containing alcohols and electrolytes
- SE455 **HENRYS, S.A.**; URUSKI, C.; GIGGENBACH, W.F.; ALLIS, R.  
Squeezing the sponge: gas and fluid along the Hikurangi Margin, North Island, New Zealand
- SE456 KAYEN, R.; SCHOLL, D.; KVENVOLDEN, K.; LEE, H.  
Global change, gas hydrate, and mass wasting of the continental slope
- SE457 VILLINGER, H.; GREVEMEYER, I.; ROSENBERGER, A.; KAUL, N.  
An integrated study of seismic and hydrothermal characteristics on the calthrate bearing sediments of the Makran accretionary wedge off Pakistan
- SE458 **GAYANOV, V.G.**; **CIFCI, G.**  
General characteristics of the Black Sea mud volcanoes and gas hydrates "shield" in the eastern Mediterranean Sea
- SE459 GOLUBEV, V.A.  
Evidence of presence of gas hydrates in Lake Baikal bottom sediments, based on in situ measurements of thermal conductivity
- SE460 **SOLOVIEV, V.**; GINSBURG, G.  
Submarine gas hydrates: mechanism of formation and accumulation
- SE461 **BEN-AVRAHAM, Z.**; HARTNADYB, C.J.H.; RESHEF, M.  
The occurrence and origin of a bottom-simulating reflector in the Natal Valley, off-shore southeastern Africa
- SE462 COLWELL, F.S.; DELWICHE, M.; **WEINBERG, D.M.**  
Biological activity, relative sediment permeability, and seismic events

---

**Attend the Poster Session**

---

## SE48 Gas hydrates in nature: results from geophysical and geochemical studies

Convener: Pecher, I.A.

Co-Convener(s): Kukowski, N.

**Friday, 24 April 1998**

Lecture Room: R1

Chairperson: Hesse, R.

- 08:30 MATSUMOTO, R.; LU, H.; HIROKI, Y.; WASEDA, A.; BABA, K.; YAGI, M.; FUJII, T.  
Marine gas hydrates and methane rich cold seeps in Nankai Trough, off central Japan (Solicited Paper)
- 09:00 SAKAI, A.  
Broad-band seismic data acquisitions for fine scale imaging and velocity determination associated with BSR
- 09:15 ROUSSEAU, V.; SAKAI, A.; SINGH, S.C.; MINSHULL, T.A.  
Is blanking effect associated with high velocity hydrate bearing sediments above BSR?
- 09:30 POSEWANG, J.; MIENERT, J.; LUKAS, D.  
Double bsrs as indicators for changes in the hydrate stability field on the Norwegian continental margin
- 09:45 MCGEE, T.  
A single-channel seismic reflection method for quantifying lateral variations in BSR reflectivity
- 10:00 **PECHER, L.A.**; RANERO, C.R.; VON HUENE, R.  
BSRs offshore Costa Rica
- 10:15 VON HUENE, R.; KUKOWSKI, N.; PECHER, I.A.  
Neotectonics and the origins of BSRs along the Peru margin
- 10:30 BREAK
- Chairperson: McGee, T.
- 11:00 **ZATSEPINA, O.Y.**; BUFFETT, B.A.  
Two-phase equilibria between hydrate and seawater (Solicited Paper)
- 11:30 HESSE, R.; FRAPE, S.K.; EGEBERG, P.  
Solute transport mechanisms in Blake-Ridge submarine gas-hydrate zone: halogens, chlorine, oxygen and hydrogen isotopes (ODP LEG 164)
- 11:45 **PIERRE, C.**; ROUCHY, J.M.; GAUDICHET, A.  
Stable isotope composition and mineralogy of the diagenetic carbonates associated with the gas hydrates in the sediments of the Blake Ridge (ODP LEG 164)
- 12:00 WALIA, R.; HANNAY, D.; SPENCE, G.; HYNDMAN, R.; CHAPMAN, R.; MI, Y.  
Deep towed multichannel survey to study the gas hydrates offshore Vancouver island
- 12:15 GANGULY, N.; **SPENCE, G.D.**; CHAPMAN, N.R.; HYNDMAN, R.D.  
Heat flow variations from bottom simulating reflectors on the Cascadia margin
- 12:30 **HANNAY, D.E.**; WALIA, R.; CHAPMAN, N.R.  
Analysis of high-resolution deep-tow multichannel data from Vancouver Island gas hydrate sites
- 12:45 **SCHOLL, D.W.**; HART, P.E.  
Geophysical evidence for dense masses of methane hydrate in the deep Bering Sea basin
- 13:00 END OF SESSION

## SE49 Marine magnetics 35 years after Vine-Matthews-Morley discovery (in memory of D. Matthews)

Convener: Dymant, J.  
Co-Convener(s): Körner, U.  
**Tuesday, 21 April 1998**  
Lecture Room: R9  
Co-sponsored by: Inter Ridge  
Chairpersons: Dymant, J.; Körner, U.

- 14:00 DYMENT, J.  
Vine-Matthews-Morley anomalies: from satellite to submersible (Solicited Paper)
- 14:30 RAVILLY, M.; DYMENT, J.; GENTE, P.; THIBAUD, R.  
Axial magnetic anomaly amplitudes along the mid-Atlantic ridge between 20° and 40°N
- 14:50 PATRIAT, PH.; ROMMEVAUX-JESTIN, C.; MERCURIEV, S.  
Variability of the magnetic anomalies over the slow spreading ridges and their interpretation
- 15:10 POULIQUEN, G.; ROMMEVAUX-JESTIN, C.; PATRIAT, P.  
3D magnetic modelling on slow-spreading ridges: importance of end-effects near discontinuities
- 15:30 HOREN, H.; OUF, O.; CANNAT, M.  
How do serpentinized periodities contribute to marine magnetic anomalies?
- 15:50 TEBBENS, S.F.; CANDE, S.C.  
Southeast Pacific tectonic evolution since 33 Ma: stepwise midocean triple junction migrations
- 16:10 Concluding Remarks  
16:30 END OF SESSION

## SE50 Recent marine geological and geophysical investigation in the Mediterranean and Black Sea

Convener: Ergün, M.  
Co-Convener(s): Ivanov, M.K.; Woodside, J.M.  
**Wednesday, 22 April 1998**  
Lecture Room: R1  
Chairperson: Ergün, M.  
Editors: Ergün, M.; Ivanov, M.K.; Woodside, J.M.

### Mediterranean Sea

- 09:00 BOULOU BASSI, I.; BLANC-VALLERON, M.-M.;  
SE50-001 BAE, S.-H.  
Sources of organic matter in Pliocene sapropels from eastern Mediterranean: molecular and sedimentological approach
- 09:20 ROSE, TH.; VILLINGER, H.  
SE50-002 Estimating in-situ pore pressure and fluid flow by modelling PUPPI pressure decays from the Mediterranean ridge
- 09:40 LELGEMANN, H.; KLAESCHEN, D.; IMERSE  
SE50-003 WORKING GROUP  
AVA-analysis across the western Mediterranean ridge
- 10:00 MASCLE, J.; SHIPBOARD SCIENTIFIC PARTY  
SE50-004 New data in eastern Mediterranean from the Prised II survey (R/V Atalante)
- 10:20 ERGUN, M.; WOODSIDE, J.M.; ORAL, E.Z.  
SE50-005 Geophysical data for the Anaximander mountains

- 10:40 HALL, J.; AKSU, A.; CALON, T.  
SE50-006 Neogene tectonics of the Cyprian Arc region
- 11:00 BEN-AVRAHAM, Z.  
SE50-007 Tectonic setting of the Levant margin
- 11:20 IVANOV, M.K.; WOODSIDE, J.M.  
SE50-008 Intensive fluid flow and accompanying phenomena in eastern Mediterranean and Black Sea sediments \*
- 11:40 LUNCH  
12:00 Business Meetings

Chairperson: Ivanov, M.K.  
Editors: Ergün, M.; Ivanov, M.K.; Woodside, J.M.

### Black Sea

- 14:00 SARI, C.; OZEL, E.; ERGUN, M.  
SE50-009 Structure of the Black Sea from the geophysical data
- 14:20 CIFCI, G.; KRYLOV, O.; ERGUN, M.  
SE50-011 Sonar and seismic investigations in the Sorokhin Trough (SE Crimea, Black Sea)
- 14:40 BOURIAK, S.V.  
SE50-012 Seismic evidence for shallow gas accumulations in the Sorokin trough (north-eastern part of the Black Sea)
- 15:00 KOZLOVA, E.; VOLKONSKAYA, A.  
SE50-013 Quaternary sedimentary processes on the north-eastern margin of the Black Sea
- 15:20 YASAR, D.; AKSU, A.; HISCOTT, R.  
SE50-014 The importance of the Marmara Sea gateway in paleoceanographic evolution of the Aegean Sea
- 15:40 BELENKAYA, I.; STADNITSKAYA, A.  
SE50-015 Authigenic carbonate inclusions in gas saturated sediments of the Black Sea
- 16:00 VAN KESTEREN, W.G.M.; KUYPER, C.;  
SE50-016 CROSATO, A.  
Seabed stability related to gas phenomena
- 16:20 STADNITSKAYA, A.; BELENKAYA, I.  
SE50-017 Gas hydrates in the seabed sediments on the north-eastern part of the Black Sea
- 16:40 END OF SESSION

## SE50 Recent marine geological and geophysical investigation in the Mediterranean and Black Sea - Poster Session

Convener: Ergün, M.  
Co-Convener(s): Ivanov, M.K.; Woodside, J.M.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Wednesday, 17:30 - 19:00**  
Poster Area: RHODES - SE  
Chairperson: Woodside, J.M.  
Editors: Ergün, M.; Ivanov, M.K.; Woodside, J.M.

- SE463 KOPF, A.; VIDAL, N.; KLAESCHEN, D.; VON  
SE50-018 HUENE, R.  
MCS profiles in a zone of incipient collision between Africa and Eurasia, eastern Mediterranean
- SE464 CALON, T.; AKSU, A.; HALL, J.  
SE50-019 Neogene tectonics of the Cilicia-Adana basin
- SE465 AKSU, A.; CALON, T.; HALL, J.  
SE50-020 Neogene tectonics of the Latakya basin
- SE466 DACHEV, CHR.; KOSTYANOV, S.  
SE50-021 Some geological results and evolution of the west Black Sea basin

SE467 COMAS, M.C.; FERNANDEZ, M.;  
SE50-022 ALVAREZ-MARRON, J.; MARZAN, I.; SOTO,  
J.I.; YELLES, K.  
Heat-flow survey in the south-Balearic and  
Alboran basins produces new data, the  
"FLUCALB II" cruise \*

## SE51 Structures and processes in sedimentary fans - Poster Session

Convener: Uenzelmann-Neben, G.  
Co-Convener(s): Droz, L.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Thursday, 17:00 - 19:00  
Poster Area: RHODES - SE

- SE469 **RIGAUT, F.**; DROZ, L.; COCHONAT, P.; SAVOYE, B.  
Detailed morphological analysis of deep-sea meandering channels: example of the Zaire (Congo) fan channel
- SE470 **UENZELMANN-NEBEN, G.**  
Neogene sedimentation history of the Congo Fan
- SE471 **CHEVALIER, C.**; LEFEBVRE, J.P.  
Study of dynamic of mud bank along the Guiana coast
- SE472 **DROZ, L.**; SAVOYE, B.; AUFFRET, G.; SEDIFAN SHIPBOARD SCIENTIFIC PARTY  
Celtic deep-sea fan (western Europe): architecture and sedimentary evolution
- SE473 **DROZ, L.**; LOUBRIEU, B.; BERNE, S.; COCHONAT, P.; CALMAR SHIPBOARD SCIENTIFIC PARTY  
Turbidities of the western Golfe du Lion: relationships between Pyreneo-Languedocian and Rhone inputs
- SE474 **BELLAICHE, G.**; MASCLE, J.; DROZ, L.; GAULLIER, V.; MART, Y.; SHIPBOARD SCIENTIFIC PARTY  
The Nile deep-sea fan: preliminary results of the Prismed II cruise (R/V Atalante)

## SE51 Structures and processes in sedimentary fans

Convener: Uenzelmann-Neben, G.  
Co-Convener(s): Droz, L.  
Friday, 24 April 1998  
Lecture Room: R1  
Chairperson: Uenzelmann-Neben, G.

- 14:00 **PIPER, D.J.W.**  
Controls on fans architecture and deposits by turbidity current initiation processes (Solicited Paper)
- 14:30 **SAVOYE, B.**; GUIOMAR, M.; REHAULT, J.P.  
Seismic architecture of a small deep-sea fan (east Corsica margin, western Mediterranean)
- 14:45 **DOS REIS, T.**; MAUFFRET, A.; GORINI, C.  
Salt tectonics growth fault pattern in the Gulf of Lion Plio - quaternary/France
- 15:00 **PIPER, D.J.W.**; FLOOD, R.D.  
Synthesis of results from ODP LEG 155, Amazon fan

- 15:15 **SCHLÜNZ, B.**; SCHNEIDER, R.R.; MÖLLER, P.J.  
Terrestrial organic carbon accumulation on the Amazon deep sea fan during the last glacial sea level low stand
- 15:30 **WHITTINGTON, R.J.**; FORSBERG, C.-F.; DOWDESWELL, J.A.  
Holocene fjord side-wall fan deltas in Kongsfjorden, Spitsbergen
- 15:45 **HÜBSCHER, C.**; BREITZKE, M.; SPIESS, V.  
A high-resolution reconnaissance seismic survey in the Bengal Fan
- 16:00 END OF SESSION

## SE52 Spontaneous globally synchronized variations of physical parameters (co-sponsored by G)

Convener: Rokityansky, I.I.  
Co-Convener(s): Denis, C.; Varga, P.  
Monday, 20 April 1998  
Lecture Room: R1  
Chairperson: Denis, C.  
Editors: Rokityansky, I.I.; Klyushin, J.G.

- 14:00 **ROKITYANSKY, I.I.**  
SE52-001 Phenomenon of spontaneous globally synchronized variations of physical parameters (SV)
- 14:20 **SHNOLL, S.E.**; AGULOVA, L.P.; KOLOMBET, V.A.; ZAIKIN, A.N.; POZHARSKI, E.V.; ZENCHENKO, T.A.; KONRADOV, A.A.  
SE52-002 On the similarity of histograms fine structure for synchronized time series of different nature processes at different locations (Solicited Paper)
- 14:50 **VARGA, P.**  
SE52-003 Study of the temporal variation of the gravitational constant
- 15:10 **KLYUSHIN, J.G.**  
SE52-004 On the Maxwell approach to gravity
- 15:30 **RUDESKO, V.N.**  
SE52-005 Reliability of the neutrino-gravity correlation effect during of the SN1987A explosion: a statistical miracle or physical reality?
- 15:50 **ZVEREVA, I.M.**; **ZENCHENKO, T.A.**; **POZHARSKI, E.V.**; **SHNOLL, S.E.**  
SE52-006 On the synchronized changes of histograms fine structure for time series of radium family isotopes activity (Poster)
- 15:55 **KLYUSHIN, J.G.**  
SE52-007 Forces originating ocean flows (Poster)
- 16:00 **MALIMON, A.N.**  
SE52-008 The wave equations for oscillator with Planck's constant and force quantum (Poster)
- 16:05 **KLYUSHIN, J.G.**  
SE52-009 A force produced on static electric charge by current in neutral conductor (Poster)
- 16:10 **SMIRNOV, A.P.**  
SE52-010 A new class of phenomena in natural processes and technologies (Poster)
- 16:15 **DENIS, C.**; **ROKITYANSKY, I.I.**  
Concluding remarks
- 16:30 END OF SESSION
- 17:00 Opening
- 19:30 Reception

**SE52 Spontaneous globally synchronized variations of physical parameters (co-sponsored by G) - Poster Session**

Convener: Rokityansky, I.I.

Co-Convener(s): Denis, C.; Varga, P.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - SE

Chairperson: Varga, P.

Editors: Rokityansky, I.I.; Klyushin, J.G.

SE342 ZVEREVA, I.M.; ZENCHENKO, T.A.;

SE52-006 POZHARSKI, E.V.; SHNOLL, S.E.

On the synchronized changes of histograms fine structure for time series of radium family isotopes activity

SE343 KLYUSHIN, J.G.

SE52-007 Forces originating ocean flows

SE344 MALIMON, A.N.

SE52-008 The wave equations for oscillator with Planck's constant and force quantum

SE345 KLYUSHIN, J.G.

SE52-009 A force produced on static electric charge by current in neutral conductor

SE346 SMIRNOV, A.P.

SE52-010 A new class of phenomena in natural processes and technologies

SE347 ROKITYANSKY, I.I.

SE52-011 Sensors and sources of spontaneous variations (SV) of physical parameters

SE348 KLYUSHIN, J.G.

SE52-012 On the forces between two moving electric charges

SE349 SHLIENOV, A.G.

SE52-013 Results of observation of extragalactic objects

SE350 KUDELYA, L.

SE52-014 Oscillator variations in time and spatial displacement

SE351 LAVRENTEV, M.M.; EGANOVA, I.A.

SE52-015 Physical anomalies connected with the Sun

SE352 LAVRENTEV, M.M.; EGANOVA, I.A.

SE52-016 Some anomalies on the Earth in the time of Jovian catastrophe

SE352A EGANOVA, I.A.

SE52-017 Some characters of variations of the geological objects' weight

SE352B SHNOLL, S.E.; POZHARSKI, E.V.;

SE52-018 KOLOMBET, V.A.; ZVEREVA, I.M.; ZENCHENKO, T.A.; KONRADOV, A.A.

On the discreteness of different processes time series measurements which results from cosmophysical sources

SE352C POZHARSKI, E.V.

SE52-019 Histogram form recognition: algorithms and software

SE

## European Geophysical Society

*Inviting the scientists of the world to participate in the*

## Millennium Conference on Earth, Planetary & Solar Systems Sciences

**- 25th General Assembly -**

Fortezza da Basso, Florence, Italy  
3-7 April 2000

Join this unique celebration of the past and the new millennium in the capital of Renaissance and in the beauty of Tuscany.

Suggestions regarding the scientific programme and any inquiries should be addressed to:

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
EGS@COPERNICUS.ORG  
<http://www.copernicus.org/EGS/EGS.html>



# Geodesy

## G1 Environmental effects on gravity and intercomparisons with other techniques - Poster Session

Convener: Hipkin, R.G.

Co-Convener(s): van Dam, T.M.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 2 - G

- G081 QIU QI-XIAN; MÄKINEN, J.; DAI QI-CHAO; JIN YI-SHENG  
Influence of variations in subsurface water storage on gravity at the Xi'an absolute gravity station
- G082 MALIKOVA, K.SH.; KLAVDIEVA, M.M.; BEKLEMISHEV, A.B.; POTAPOV, O.A.  
Microtremor spectrum dynamics, geochemical and gravity data in the monitoring of the intraplate fracture zones

## G1 Environmental effects on gravity and intercomparisons with other techniques

Convener: Hipkin, R.G.

Co-Convener(s): van Dam, T.M.

Wednesday, 22 April 1998

Lecture Room: R7

Chairperson: N.N.

- 14:00 KLOSKO, S.; TORRENCE, M.; CHAO, B.  
Secular and periodic geopotential changes observed with SLR
- 14:15 DAVIES, M.A.; HARROP, N.D.; RYMER, H.  
Experimental investigation into the origin of tares induced by ground vibration in Lacoste & Romberg gravity meters
- 14:30 BONVALOT, S.; DIAMENT, M.; GABALDA, G.  
Continuous gravity recording with Scintrex CG-3M meters: a promising tool for monitoring active zones
- 14:45 BAKER, T.F.; BOS, M.S.; HOPEWELL, H.  
The effects of ocean and shelf tides on absolute gravity measurements
- 15:00 VAUTERIN, P.; VAN DAM, T.; FRANCIS, O.  
The correction of the pressure effects for the superconducting gravimeters in Membach, Belgium and Boulder, Colorado (Solicited Paper)
- 15:30 KRONER, C.; JAHR, TH.; JENTZSCH, G.  
Time-dependent gravity and environmental observations at Moxa observatory: first results
- 15:45 NEUMEYER, J.; BARTHELMES, F.; WOLF, D.  
Estimates of environmental effects in superconducting gravimeter data
- 16:00 VIRTANEN, H.; KÄÄRIÄINEN, J.  
Non-tidal gravity variations observed by superconducting gravimeter GWR T020
- 16:15 RICHTER, B.; HARNISCH, M.; HARNISCH, G.; SCHWAHN, W.  
Air pressure and groundwater effects at fiducial sites seen by continuous gravimeter registrations

16:30 SCHEINERT, M.; DIETRICH, R.

Gravity observations in Greenland: how to separate environmental effects and ice mass balance signals (Solicited Paper)

17:00 GERSTENECKER, C.

Influence of topography and ground water changes on secular gravity changes

17:15 END OF SESSION

## G2 Recent crustal movements of coastal regions: new geodetic, geologic and geophysical results

Convener: Pirazzoli, P.A.

Co-Convener(s): Bastos, L.

Wednesday, 22 April 1998

Lecture Room: R8

Co-sponsored by: IGCP (UNESCO-IUGS) Project 367 "Rapid Coastal Changes in the Late Quaternary"; INQUA Commission on Neotectonics; INQUA Commission on Quaternary Shorelines

Chairpersons: Pirazzoli, P.A.; Bastos, L.

Editors: Bastos, L., Pirazzoli, P.A.

09:00 PELTIER, W.R.

G2-001 Postglacial sea level history and coastal tectonics (Solicited Paper)

09:30 KOOL, H.; JOHNSTON, P.; LAMBECK, K.;

G2-002 SMITHER, C.; MOLENDIJK, R.E.

Natural causes of recent (~100 yr) vertical land movement in the Netherlands

09:50 KIDEN, P.; DENYS, L.

G2-003 Rate and magnitude of late quaternary isostatic movements in the southern North Sea

10:10 GRANJA, H.; SENOS MATIAS, M.; RIBEIRO, I.;

G2-004 SOARES DE CARVALHO, G.

Some neotectonic indicators in quaternary formations of the northwest coastal zone of Portugal

10:30 ANTONIOLI, F.; SILENZI, S.; VITTORI, E.

G2-005 Sea level changes and tectonic stability: precise measurements in 3 coastlines of Italy considered stable during last 125 ky

10:50 ANTONIOLI, F.; CREMONA, G.; IMMORDINO, F.;

G2-006 PUGLISI, C.; ROMAGNOLI, C.; SILENZI, S.;

VALPRED, E.; VERRUBBI, V.

Quaternary and holocene differential movements in a Mediterranean coastal area (S. Vito Lo Capo - Sicily - Italy)

11:10 MORHANGE, C.; BOURCIER, M.; GOIRAN, J.P.;

G2-007 LABOREL, J.; BATS, M.; GIALANELLA, C.;

GRIMACO, L.

Recent vertical crustal movements in Pozzuoli, phlegrean fields Caldera, southern Italy

11:30 STIROS, S.C.; PIRAZZOLI, P.A.

G2-008 Value of biological indicators to detect relative sea-level changes: a geodetic confirmation

11:50 LUNCH

12:00 Business Meetings

## Attend the Business Meeting of your Section

On Wednesday, 22 April, 12.00-14.00 in Lecture Room R5

Chairpersons: Bastos, L.; Pirazzoli, P.A.  
Editors: Pirazzoli, P.A., Bastos, L.

- 14:00 **ASHKENAZI, V.**; BINGLEY, R.M.; BOOTH, S.J.;  
G2-009 PENNA, N.T.; GREENAWAY, R.G.; NURSEY, K.;  
BEDLINGTON, D.; ELLISON, R.A.;  
ARTHURTON, R.S.  
Geodetic and geological monitoring of long term  
crustal movements in the Thames Estuary and  
Greater London
- 14:20 **BECKER, M.**; GARATE, J.; NEUMAIER, P.;  
G2-010 RICHTER, B.; BÜRKI, B.  
First results for crustal motion and tide gauge  
position variation at the coast of Spain from the  
SELF-II project
- 14:40 **TALAYA, J.**; FEIGL, K.; TERMENS, A.;  
G2-011 COLOMINA, I.  
Practical lessons from analysis of a GPS network  
designed to detect movements of  $\approx 1$  mm/y in the  
eastern Pyrenees
- 15:00 **PAGARETE, J.**; MENDES, V.B.  
G2-012 Global positioning system crustal deformation  
studies in the lower Tagus valley area from 1994 to  
1997
- 15:20 **SIMONS, W.J.F.**; HAJI ABU, S.; AMBROSIUS,  
G2-013 B.A.C.; BOCK, Y.; KAHAR, J.; MORGAN, P.;  
NOOMEN, R.; SARSITO, D.A.; SUTISNA, S.;  
WALPERSDORF, A.  
Results of the Sulawesi 1997 GPS campaign
- 15:40 **CAPRA, A.**; GANDOLFI, S.; STOCCHINO, C.;  
G2-014 VITTUARI, L.  
Kinematic GPS for the study of tidal undulation of  
floating ice tongues
- 16:00 **PIRAZZOLI, P.A.**; STIROS, S.C.; ARNOLD, M.;  
G2-015 LABOREL, J.; LABOREL-DE GUEN, F.  
Late Holocene coseismic vertical displacements and  
tsunami deposits near Kynos, Gulf of Euboea,  
central Greece \*
- 16:20 **BASTOS, L.**  
Concluding remarks
- 16:30 **END OF SESSION**

### **G3 Geophysical applications of radar interferometry**

Convener: Massonnet, D.  
Co-Convener(s): Feigl, K.  
**Monday, 20 April 1998**  
Lecture Room: R9  
Co-sponsored by: CNES, CNRS  
Chairperson: Massonnet, D.

- 11:00 **AMELUNG, F.**; ZEBKER, H.; SEGALL, P.  
Surface deformation measurements of volcanoes  
using SAR-interferometry
- 11:15 **DE CHABALIER, J.B.**; RUEGG, J.C.; **ARMIGO,**  
**R.**; MASSONNET, D.; FRUNEAU, B.; VADON,  
H.; DELACOURT, C.; CAMPOS, J.  
Modelling the deformation related to the MW=8.1  
Antofagasta earthquake of northern Chile (1995)  
using SAR interferometry and GPS measurements
- 11:30 **KLINGER, Y.**; MICHEL, R.; AVOUAC, J.P.;  
DORBATH, L.  
Investigation of the MW=7.3 Aqaba earthquake of  
Nov. 22, 1995 from seismology and interferometry

- 11:45 **HERNANDEZ, B.**; COTTON, F.; CAMPILLO, M.  
What is the resolving power of interferometric data  
to constrain slip distribution of earthquakes at depth?
- 12:00 **HUOT, E.**; HERLIN, I.  
Land-surface monitoring using interferometric phase
- 12:15 **MASSONNET, D.**; **GAUDIN, J.C.**  
A time-domain processor for generating SAR images  
as half-interferograms
- 12:30 **CALAIS, E.**; COURBOULEX, F.; COTTON, F.  
SAR interferometry study of the M8.0 Oct. 9, 1995,  
Jalisco earthquake (Mexico)
- 12:45 **Concluding Remarks**
- 13:00 **END OF SESSION**

### **G3 Geophysical applications of radar interferometry - Poster Session**

Convener: Massonnet, D.  
Co-Convener(s): Feigl, K.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - G  
Chairperson: Feigl, K.

- G083 **GASPERI, J.**; FEIGL, K.L.; SIGMUNDSSON,  
F.; RIGO, A.  
Satellite radar interferometry in the southern  
Iceland seismic zone: initial results
- G084 **HENRIOT, O.**; VILLEMIN, T.; JOUANNE, F.  
Surface deformation at the Tjörnes rift-transform  
junction (north Iceland) computed from SAR  
images
- G085 **FEIGL, K.L.**; RIGO, A.; COTTON, F.  
Satellite radar interferometry in the French Alps:  
initial results
- G086 **RIGO, A.**; MASSONNET, D.  
SAR interferometry on the St-Paul de Fenouillet  
earthquake (18 February 1996; ML=5.2; Pyre-  
nees, France): separating atmospheric and  
coseismic signatures
- G087 **FRUNEAU, B.**; RUDANT, J.-P.; CLASSEAU,  
N.  
Does the effect of pollution as atmospheric  
inhomogeneities introduce phase shifts in SAR  
interferograms on urban sites?
- G088 **DESPAN, D.**; BEDIDI, A.; RUDANT, J.-P.;  
NESTI, G.; TARCHI, D.; BACHELIER, E.;  
BORDERIE, P.  
Moisture effect on phase and amplitude of  
backscattered microwave signal from soil surfac-  
es

### **G4 Precise satellite orbits for geophysical applications - Poster Session**

Convener: Rothacher, M.  
Co-Convener(s): Eanes, R.J.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 2 - G  
Chairpersons: Rothacher, M.; Eanes, R.J.

- G047 **ZIQUING, W.**; GANG, W.  
Regional GPS orbit determination

- G048 RIES, J.C.; EANES, R.J.; METRIS, G.; VOKROUHLICKY, D  
Eccentricity excitations of LAGEOS and LAGEOS-2
- G049 CATALAN M., M.; CATALAN P.-U., M.  
A short arc orbit method for altimeter satellite with laser reflectors
- G050 ENNINGHORST, K.; RENTSCH, M.  
Rapid orbit and altimeter products for ERS-2
- G051 METRIS, G.  
Derivatives of the gravity potential with respect to rectangular coordinates and applications
- G052 CHEN, Z.; KÖNIG, R.  
On GFZ-1, DIADEME-IC and DIADEME-1D orbit and gravity field modelling
- G053 SOUDARIN, L.; CRETAUX, J.F.; BOUILLE, F.; CAZENAVE, A.  
Present-day tectonic motions and crustal deformations from the DORIS space system
- G054 PEROSANZ, F.; BIANCALE, R.  
STAR accelerometer in-flight dynamic calibration in the frame of the CHAMP geodetic mission

#### **G4 Precise satellite orbits for geophysical applications**

Convener: Rothacher, M.  
Co-Convener(s): Eanes, R.J.  
**Friday, 24 April 1998**  
Lecture Room: R8  
Chairperson: Rothacher, M.

- 08:30 BAR-SEVER, Y.E.; JEFFERSON, D.C.  
Precise GPS orbit modelling for geodesy - review and error analysis (Solicited Paper)
- 09:00 KOUBA, J.; MIREAULT, Y.; BEUTLER, G.; SPRINGER, T.; GENDT, G.  
Impact of international GPS service for geodynamics in geodetic and geophysical applications
- 09:15 SPRINGER, T.A.; BEUTLER, G.; ROTHACHER, M.  
Impact of the improved GPS orbit model
- 09:30 KIRCHENGAST, G.  
Orbit quality requirements for spaceborne atmospheric sounding using GNSS
- 09:45 EANES, R.  
Sub-centimeter Lageos orbit determination: techniques, models, and applications
- 10:00 LEMOINE, J.M.; ROZANES, P.; BIANCALE, R.  
Some geophysical results from the analysis of eleven years of LAGEOS1 data using the linking technique
- 10:15 CRETAUX, J.F.; SOUDARIN, L.; CAZENAVE, A.  
Vertical rates of the DORIS station
- 10:30 BREAK

Chairperson: Eanes, R.J.

- 11:00 LEMOINE, F.G.  
Precise orbit determination for TOPEX/POSEIDON, the challenge, the history, and the impact (Solicited Paper)
- 11:30 LOUGH, M.; HAINES, B.; MUELLERSCHOEN, R.; LICHTEN, S.; WATKINS, M.  
GPS-based precise orbit determination for altimetric satellites

- 11:45 BLESSE, F.; PALACIOS, M.; FERRER, S.  
Improving the first harmonics of the Earth geopotential by using SLR data to Etalon and GPS satellites
- 12:00 SCHARROO, R.; VISSER, P.  
A new gravity field model for the ERS missions
- 12:15 BORDI, J.J.; EANES, R.J.; RIES, J.R.; TAPLEY, B.D.  
Analysis of the Precise Range and Range-rate Equipment (PRARE) and its application to precise orbit determination
- 12:30 ENNINGHORST, K.; BEDRICH, S.; FLECHTNER, F.; TEUBEL, A.  
The motion of the PRARE-station Neumayer located on a floating ice-shelf in Antarctica
- 12:45 COX, C.M.; CHINN, D.S.; LUTHCKE, S.B.; LEMOINE, F.G.  
Precision orbit determination of the tropical rainfall measurement mission using TDRSS with application to geopotential model improvement
- 13:00 LEMOINE, F.G.; COX, C.M.; CHINN, D.S.; PAVLIS, N.K.; WANG, Y.M.; TORRENCE, M.H.; WILLIAMSON, R.G.; PAVLIS, E.C.  
Improved Earth gravity solutions derived from TDRSS tracking
- 13:15 VESPE, F.; DEVOTI, R.; LUCERI, V.  
A detailed modelling of the solar radiation pressure acting on Earth satellites of complex shape
- 13:30 END OF SESSION

#### **G5 Ocean modelling from altimetry and remote sensing (co-sponsored by OA) I**

Convener: Knudsen, P.  
Co-Convener(s): Le Traon, P.Y.  
**Thursday, 23 April 1998**  
Lecture Room: R7  
Chairperson: Hernandez, F.  
Editors: Knudsen, P.; Le Traon, P.-Y.

- 08:45 KNUDSEN, P.; LE TRAON, P.Y.  
Introduction

##### Altimeter data and assimilation

- 09:00 MASINA, S.; NAVARRA, A.; PINARDI, N.; G5-001 MASETTI, E.  
The AGORA project: 16 years of global ocean analyses for studies of climate variability (Solicited Paper)
- 09:30 FOX, A.D.; HAINEES, K.; DE CUEVAS, B.A. G5-002  
Satellite data assimilation in the OCCAM global ocean model
- 09:45 SEGSCHEIDER, J.; ALVES, O.; ANDERSON, D.; BALMASEDA ALONSO, M.; STOCKDALE, T. G5-003  
Assimilation of Topex/Poseidon data into a seasonal forecast system
- 10:00 BAHUREL, P.; GIRAUD, S.; DOMBROWSKY, E. G5-004  
Assimilation of TOPEX POSEIDON and ERS altimeter data from 1993 to 1998 in the northeast Atlantic
- 10:15 LARNICOL, G.; LE TRAON, P.Y.; MERCIER, H. G5-006  
Large scale seasonal variations of Atlantic Ocean by combining altimetric and hydrographic data in an inverse model
- 10:30 BREAK

Chairperson: Le Traon, P.-Y.  
Editors: Knudsen, P.; Le Traon, P.-Y.

- 11:00 **VEERSE, F.**; OUBERDOUS, M.  
G5-005 Assimilation of altimetric data in an ocean model for fisheries studies in upwelling areas
- 11:15 **LYARD, F.H.**  
G5-007 A variational assimilation model for the barotropic tides in a global ocean: principles and application to the long period tides
- 11:30 **GAVART, M.**; DE MEY, P.; BARAILLE, R.  
G5-008 Altimetric assimilation into primitive equations models of the Azores-Madeira region: comparison between OPA and MICOM (Poster)
- 11:35 **ARNAULT, S.**; **GREINER, E.**  
G5-009 Topex-Poseidon data assimilation in an oceanic general circulation model of the tropical Atlantic (Poster)
- 11:40 **DARR, D.**; THOMPSON, L.A.; KELLY, K.A.;  
G5-010 **VIVIER, F.**  
Modelling wind-forced seasonal-to-interannual variability of sea surface height in the North Pacific (Poster)
- 11:45 **KURAPOV, A.L.**; KIVMAN, G.A.  
G5-011 General inverse of a shelf tide model: application to the M<sub>2</sub> tide in the Barents Sea (Poster)

#### Modelling and satellite altimetry data processing

- 11:50 **PONTE, R.M.**; GASPAR, P.  
G5-012 Regional analysis of the inverted barometer effect over the global ocean (Solicited Paper)
- 12:20 **BIROL, F.**; MORROW, R.  
G5-013 A study of the south-east Indian Ocean variability from altimetric, wind and XBT data
- 12:35 **HAN, G.**; TANG, C.L.  
G5-014 Velocity and transport of the Labrador current determined from altimetric and hydrographic data
- 12:50 **LUNCH**

Chairperson: Knudsen, P.  
Editors: Knudsen, P.; Le Traon, P.-Y.

- 14:00 **BOSCH, W.**; BOCK, J.  
G5-015 The 1996 sea surface height anomaly of the North Atlantic subpolar gyre
- 14:15 **GLAZMAN, R.E.**  
G5-016 Altimeter-based refinement of turbulent diffusion coefficients
- 14:30 **SCOTT, R.B.**  
G5-017 Mechanical energy flux to the surface geostrophic flow using TOPEX/POSEIDON data
- 14:45 **VILLARES, P.**; ROJAS, J.L.; CATALAN P.-U., M.;  
G5-018 **CAMACHO, J.C.**; GOMEZ-ENRI, J.; CATALAN M., M.  
Surface meddies tracking using spatial techniques
- 15:00 **HERNANDEZ, F.**; TYCHENSKY, A.  
G5-019 Synthetic geoid for mesoscale studies of the Azores current
- 15:15 **PEACOCK, N.R.**; LAXON, S.W.; SCHARROO, R.;  
G5-020 **MASLOWSKI, W.**  
Applications of high accuracy altimetric height measurements in ice covered seas to studies of the polar oceans, and comparisons with models

- 15:30 **LEEUWENBURGH, O.**; ANDERSEN, O.;  
G5-021 **HUESS, V.**  
Seasonal tide variations and shallow water tides from tide gauges and altimetry
- 15:45 **KLOKOCNIK, J.**; WAGNER, C.A.;  
G5-022 **KOSTELECKY, J.**; RENTSCH, M.  
Residual errors in dual-satellite crossover altimetry data: an independent check
- 16:00 **MORROW, R.**  
G5-023 Interannual variability in the eastern Indian Ocean (Poster)
- 16:05 **LEBEDEV, S.A.**  
G5-024 The diagnostic analysis of baroclinic ocean dynamics by satellite altimetry data (Poster)
- 16:10 **MARTINEZ BENJAMIN, J.J.**; GUASCH, A.;  
G5-025 **SARIFFENA, D.**; CORREDOR, R.  
Application of Topex/Poseidon altimeter data for CEOF and along-track analysis in the eastern Atlantic Ocean and western Mediterranean Sea (Poster)
- 16:15 **SCHARROO, R.**; NAEIJE, M.; OLDENBORG, G.J.;  
G5-026 **BURGERS, G.**; CARDON, K.; GORYL, P.; BENVENISTE, J.  
Monitoring the 1997/1998 El Nino by ERS-2 (Poster)
- 16:20 **BOSCH, W.**; **SCHMIDT, M.**  
G5-027 EOF- and wavelet analysis of the sea surface variability (Poster)
- 16:25 **KNUDSEN, P.**  
G5-028 High resolution mean sea surfaces from multi mission satellite altimetry (Poster)
- 16:30 **KNUDSEN, T.**  
G5-029 An integrated system for handling, analysis and visualization of ocean data (Poster)
- 16:35 **PAULUHN, A.**; CHAO, Y.  
G5-030 Tracking eddies in the subtropical north-western Atlantic Ocean (Poster)
- 16:40 **BAUMGARTNER, M.**; **BOSCH, W.**; **BOCK, J.**; **SCHMIDT, M.**  
G5-031 North Atlantic sea surface variability - a comparison between altimetry and numerical modelling (Poster)
- 16:45 **GILLE, S.T.**  
G5-032 Evaluating southern ocean response to wind forcing (Poster)
- 16:50 **END OF PART I**

#### **G5 Ocean modelling from altimetry and remote sensing (co-sponsored by OA) - Poster Session**

Convener: Knudsen, P.  
Co-Convener(s): Le Traon, P.-Y.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: **Thursday, 17:00 - 19:00**  
Poster Area: AGORA 2 - G  
Chairperson: Knudsen, P.  
Editors: Knudsen, P.; Le Traon, P.-Y.

- G055 **GAVART, M.**; DE MEY, P.; BARAILLE, R.  
G5-008 Altimetric assimilation into primitive equations models of the Azores-Madeira region: comparison between OPA and MICOM
- G056 **ARNAULT, S.**; **GREINER, E.**  
G5-009 Topex-Poseidon data assimilation in an oceanic general circulation model of the tropical Atlantic

- G057 DARR, D.; THOMPSON, L.A.; KELLY, K.A.;  
G5-010 VIVIER, F.  
Modelling wind-forced seasonal-to-interannual variability of sea surface height in the North Pacific
- G058 KURAPOV, A.L.; KIVMAN, G.A.  
G5-011 General inverse of a shelf tide model: application to the  $M_2$  tide in the Barents Sea
- G059 MORROW, R.  
G5-023 Interannual variability in the eastern Indian Ocean
- G060 LEBEDEV, S.A.  
G5-024 The diagnostic analysis of baroclinic ocean dynamics by satellite altimetry data
- G061 MARTINEZ BENJAMIN, J.J.; GUASCH, A.;  
G5-025 SARIFFENA, D.; CORREDOR, R.  
Application of Topex/Poseidon altimeter data for CEOF and along-track analysis in the eastern Atlantic Ocean and western Mediterranean Sea
- G062 SCHARROO, R.; NAEIJE, M.; OLDENBORG,  
G5-026 G.J.; BURGERS, G.; CARDON, K.; GORYL, P.; BENVENISTE, J.  
Monitoring the 1997/1998 El Nino by ERS-2
- G063 BOSCH, W.; SCHMIDT, M.  
G5-027 EOF- and wavelet analysis of the sea surface variability
- G064 KNUDSEN, P.  
G5-028 High resolution mean sea surfaces from multi mission satellite altimetry
- G065 KNUDSEN, T.  
G5-029 An integrated system for handling, analysis and visualization of ocean data
- G066 PAULUHN, A.; CHAO, Y.  
G5-030 Tracking eddies in the subtropical north-western Atlantic Ocean
- G067 BAUMGARTNER, M.; BOSCH, W.; BOCK, J.;  
G5-031 SCHMIDT, M.  
North Atlantic sea surface variability - a comparison between altimetry and numerical modelling
- G068 GILLE, S.T.  
G5-032 Evaluating southern ocean response to wind forcing
- G069 DADOU, I.; GARCON, V.  
G5-036 Mesoscale variability of chlorophyll and SST in the confluence of the Brazil and Malvinas currents from satellite data
- G069A TYLER, R.H.; SANFORD, T.B.;  
G5-037 OBERHUBER, J.M.  
The potential for using ocean generated electromagnetic fields to remotely sense ocean variability

## Physics and Chemistry of the Earth

If you intend to organize an event at a larger meeting, a workshop or topical conference within geology, geochemistry, geophysics, hydrology, oceanography or atmospheric and planetary and space sciences, please consider *PCE* for the publication of your proceedings.

## G5 Ocean modelling from altimetry and remote sensing (co-sponsored by OA) II

Convener: Knudsen, P.  
Co-Convener(s): Le Traon, P.Y.  
**Friday, 24 April 1998**  
Lecture Room: R7  
Chairperson: Knudsen, P.  
Editors: Knudsen, P.; Le Traon, P.-Y.

### Other remote sensing techniques

- 09:00 MACHU, E.; GARCON, V.  
G5-033 Long term monitoring of the oceanic primary production south of South Africa: use of the remotely sensed data
- 09:15 LIFERMANN, A.; DESCHAMPS, P.Y.;  
G5-034 BRICAUD, A.; GARCON, V.; DADOU, I.  
POLDER on ADEOS: a new ocean color dataset to combine with altimetry
- 09:30 LI, H.-W.; KUO, N.-J.; HO, C.-R.; TSAI, W.-P.  
G5-035 Bio-optical empirical models of the waters adjacent to Taiwan
- 09:45 DADOU, I.; GARCON, V.  
G5-036 Mesoscale variability of chlorophyll and SST in the confluence of the Brazil and Malvinas currents from satellite data (Poster)
- 09:50 TYLER, R.H.; SANFORD, T.B.; OBERHUBER,  
G5-037 J.M.  
The potential for using ocean generated electromagnetic fields to remotely sense ocean variability (Poster)
- 09:55 END OF SESSION

## G6 High resolution monitoring of land and ice surface with altimetry and SAR interferometry

Convener: Klees, R.  
Co-Convener(s): Remy, F.  
**Thursday, 23 April 1998**  
Lecture Room: R5  
Chairperson: Remy, F.

- 09:00 ROTT, H.; SCHEUCHL, B.; SIEGEL, A.  
Small-scale motion in alpine regions by means of ERS SAR interferometry (Solicited Paper)
- 09:30 METZIG, R.; DACH, R.; DIETRICH, R.;  
HARTMANN, R.; KORTH, W.; PERLT, J.;  
WINZER, W.  
ERS-1&2 tandem mission InSAR data of Antarctica - glaciological application and assessment of accuracy
- 09:45 XIA, Y.; REIGBER, CH.; KLOTZ, M.J.;  
ANGERMAN, D.  
Crustal deformation monitoring in the Antofagasta region
- 10:00 CARNEC, C.; FABRIOL, H.; GLOWACKA, E.;  
ARELLANO, F.  
Land subsidence measurements at Cerro Prieto geothermal field (Baja California, Mexico) using SAR interferometry

- 10:15 NIELSEN, C.S.; FORSBERG, R.; KELLER, K.; MOHR, J.J.  
Topography and surface flow of the Geikie ice cap derived from SAR interferometry, laser altimetry and GPS measurements
- 10:30 BREAK

Chairperson: Remy, F.

- 11:00 LEGRESY, B.; REMY, F.; SCHAEFFER, P.  
Satellite radar altimetric survey of the polar ice caps and wind induced features (Solicited Paper)
- 11:30 TESTUT, L.; REMY, F.  
Ice sheet rheology features derived from ERS-1 precise topography
- 11:45 BERRY, P.A.M.; THORNTON, S.R.; FEATHERSTONE, W.E.  
Accuracy assessment of altimeter derived orthometric heights using regional digital elevation models
- 12:00 DOWNSON, M.; BERRY, P.A.M.  
Near-global crossover analysis of ERS-1 altimeter data over land
- 12:15 Concluding Remarks
- 12:30 END OF SESSION

## **G6 High resolution monitoring of land and ice surface with altimetry and SAR interferometry - Poster Session**

Convener: Klees, R.

Co-Convener(s): Remy, F.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 2 - G

- G001 SCHAEFFER, P.; REMY, F.; LEGRESY, B.; TESTUT, L.  
High-resolution Antarctica topography and surface features computed with altimeter data of the geodetic ERS-1 mission

## **G7 Joint EGS/AGU symposium on geodetic observation and geophysical interpretation of mass movements in the Earth system (co-sponsored by SE) Introduction**

Conveners: Dickey, J.O.; Reigber, Ch.

Monday, 20 April 1998

Lecture Room: R5

Chairpersons: Dickey, J.O.; Reigber, Ch.

- 08:30 RUMMEL, R.; GERSTL, M.  
On the possible interference of datum effects of geodetic models with temporal changes of geophysical parameters (Solicited Paper)
- 09:00 REIGBER, CH.; LÜHR, H.  
CHAMP - the next mission for major improvement in recovering the geopotentials (Solicited Paper)
- 09:30 TAPLEY, B.D.  
The gravity recovery and climate experiment (GRACE) (Solicited Paper)

- 10:00 SÜNKEL, H.  
GOCE - the gravity field and steady state ocean circulation mission of ESA (Solicited Paper)
- 10:30 BREAK

## **G7 Joint EGS/AGU symposium on geodetic observation and geophysical interpretation of mass movements in the Earth system (co-sponsored by SE) .1 Solid Earth and core**

Convener: Richter, B.

Monday, 20 April 1998

Lecture Room: R5

Chairperson: Richter, B.

- 10:45 FORTE, A.M.; MITROVICA, J.X.  
Impact of mantle convection on Earth orbit parameters and paleoclimate (Solicited Paper)
- 11:15 SABADINI, R.  
Subduction and continental collision in the Mediterranean region (Solicited Paper)
- 11:45 HINDERER, J.; BOY, J.P.  
The influence of atmospheric mass redistributions on gravity (Solicited Paper)
- 12:15 BASTOS, L.; OSORIO, J.; LAZARO, C.; KAKKURI, J.; MÄKINEN, J.; ALVES, M.; VIEIRA, R.; HEIN, G.  
Repeated gravity measurements in the Azores 1992-1997
- 12:30 MÜLLER, J.; SNEEUW, N.  
Error sources for gravity field missions in space and their effect on the final results
- 12:45 BASIC, T.; BACIC, Z.  
Results of GPS observations during the series of earthquakes in Ston region at Croatian southern Adriatic Coast in September 1996
- 13:00 LUNCH

Chairperson: Richter, B.

- 14:00 JOCHMANN, H.  
Climate cycles in gravity field variations
- 14:15 BARKIN, YU.V.  
Some effects in perturbed motion of the Earth's rigid core
- 14:30 END OF SUB-SESSION

## **G7 Joint EGS/AGU symposium on geodetic observation and geophysical interpretation of mass movements in the Earth system (co-sponsored by SE) .2 Ocean and hydrosphere**

Convener: Chao, B.F.

Monday, 20 April 1998

Lecture Room: R5

Chairperson: Chao, B.F.

- 14:30 LAGERLOEF, G.S.E., WAHR, J.M.; BRYAN, F.  
Impact of GRACE gravity mission on ocean studies (Solicited Paper)
- 15:00 KNUDSEN, P.; ANDERSEN, O.B.  
Estimates of large scale changes of mass in the oceans from satellites (Solicited Paper)

- 15:30 CHEN, J.L.; WILSON, C.R.; CHAMBRES, D.P.;  
NEREM, R.S.; TAPLEY, B.D.  
TOPEX/Poseidon observation and global water mass  
balance (Solicited Paper)
- 16:00 WAHR, J.M.; VAN DAM, T.  
Geodesy and hydrology (Solicited Paper)
- 16:30 JOHNSON, T.J.; WILSON, C.R.  
The role of ocean variability in the Earth's gravity  
field as predicted from the Parallel Ocean Climate  
model
- 16:45 CAZENAVE, A.; PONCHAUT, F.  
Temporal variations of continental lakes level from  
Topex/Poseidon (1993-1996)
- 17:00 END OF SUB-SESSION
- 17:00 Opening
- 19:30 Reception

**G7 Joint EGS/AGU symposium on geodetic  
observation and geophysical interpreta-  
tion of mass movements in the Earth  
system (co-sponsored by SE)**  
**.3 Cryosphere**

Convener: Dietrich, R.  
**Tuesday, 21 April 1998**  
Lecture Room: R5  
Chairperson: Dietrich, R.

- 08:30 DOAKE, CH.  
Review of SAR applications in Antarctic glacio-  
logical research (Solicited Paper)
- 09:00 SCHUTZ, B.E.  
Spaceborne laser altimetry for cryosphere applica-  
tions (Solicited Paper)
- 09:30 DIETRICH, R.; DACH, R.; KORTH, W.; METZIG,  
R.; PERLT, J.  
Monitoring ice dynamics in the coastal region of  
Dronning Maud Land/Atnarctica with combination of  
space and surface geodetic methods
- 09:45 END OF SUB-SESSION

**G7 Joint EGS/AGU symposium on geodetic  
observation and geophysical interpreta-  
tion of mass movements in the Earth  
system (co-sponsored by SE)**  
**.4 Atmosphere**

Convener: Geiger, A.  
**Tuesday, 21 April 1998**  
Lecture Room: R5  
Chairperson: Geiger, A.

- 09:45 MADDEN, R.A.  
Variations in the distribution of atmospheric mass  
(Solicited Paper)
- 10:15 ROTHACHER, M.; BEUTLER, G.  
Information about the atmosphere derived from GPS  
observations (Solicited Paper)
- 10:45 BREAK

Chairperson: Geiger, A.

- 11:00 ZHU, S.Y.; REIGBER, CH.; KANG, Z.; YU, Y.Q.  
Geophysical signals revealed from GPS position  
measurements

- 11:15 DICKEY, J.O.; DONG, D.; GROSS, R.S.  
Temporal variations of the geopotential: atmospheric  
excitation
- 11:30 END OF SUB-SESSION

**G7 Joint EGS/AGU symposium on geodetic  
observation and geophysical interpreta-  
tion of mass movements in the Earth  
system (co-sponsored by SE)**  
**.5 Interactions between the components  
of the Earth system**

Convener: Zerbini, S.  
**Tuesday, 21 April 1998**  
Lecture Room: R5  
Chairperson: Zerbini, S.

- 11:30 LAMBECK, K.  
Interactions between oceans, ice and solid Earth:  
glacial rebound in northwestern Europe and the  
evolution of the Baltic Sea (Solicited Paper)
- 12:00 JAMES, T.S.; IVINS, E.R.; RAYMOND, C.A.  
Antarctic crustal response predictions from the  
CLIMAP reconstruction and its possible successors  
(Solicited Paper)
- 12:30 HARRISON, C.G.A.  
Erosion, mountain building and ocean volume  
change. How do these interact? (Solicited Paper)
- 13:00 LUNCH

Chairperson: Zerbini, S.

- 14:00 BOCK, Y.; PRICE, E.; SANDWELL, D.; WAT-  
SON, K.; WILLIAMS, S.  
Observing surface displacements through integrated  
space techniques (Solicited Paper)
- 14:30 CAZENAVE, A.; MERCIER, F.; GENNERO, M.C.;  
MINSTER, J.F.  
Seasonal water mass redistribution between oceans,  
atmosphere and continents (Solicited Paper)
- 15:00 GEGOUT, P.  
Mass movements inside the solid Earth induced by  
atmosphere, oceans and solid Earth interactions  
(Solicited Paper)
- 15:30 PLAG, H.-P.  
Exogenic deformations of the Earth due to atmo-  
sphere and ocean loading (Solicited Paper)
- 16:00 SCHERNECK, H.-G.; HAAS, R.; WEBB, F.H.  
Atmospheric and ocean loading in GPS and VLBI  
(Solicited Paper)
- 16:30 BOUILLE, F.; CAZENAVE, A.; SOUDARIN, L.;  
CRETAUX, J.F.  
Geocenter variations derived from 4 years of data of  
the Doris space system. Comparison with surface  
loading data
- 16:45 PAVLIS, E.C.  
Earthcenter motion from LAGEOS 1+2 laser rang-  
ing: comparisons with geophysical fluids series
- 17:00 QIAN, B.; PEN, G.; CORTE-REAL, J.; QI, L.  
On the relationships between sea ice extent and  
atmospheric circulation in the northern hemisphere
- 17:15 BARKIN, YU.V.  
Gravitational interaction between the Earth's enve-  
lopes, the Moon, the Sun and geodynamic conse-  
quences
- 17:30 END OF SESSION

## G8 Integrated studies of sea-level fluctuations and crustal movements in the Mediterranean and adjacent regions

Convener: Cazenave, A.  
Co-Convener(s): Plag, H.-P.  
**Wednesday, 22 April 1998**  
Lecture Room: R5  
Chairperson: Cazenave, A.

- 09:00 **PIRAZZOLI, P.A.**  
Late-Quaternary and recent processes of relative sea-level change in Mediterranean coastal areas (Solicited Paper)
- 09:30 **REVA, YU.A.**  
A comparative analysis of the long-term sea level change of the Black and Caspian Sea
- 09:50 **GROTEN, E.; FENOGLIO-MARC, L.; WANG, L.**  
Long term components of sea level fluctuations in European seas
- 10:10 **PINARDI, N.; CASTELLARI, S.**  
The Mediterranean Sea general circulation and sea level variability from numerical simulations (Solicited Paper)
- 10:40 **WAKELIN, S.I.; PROCTOR, R.**  
A tide and storm surge model for the Mediterranean Sea
- 11:00 **LUNCH**
- 12:00 **Business Meetings**
- Chairperson: Plag, H.-P.
- 14:00 **LE TRAON, P.Y.; DUCET, N.; GOUZELIN, P.**  
Response of the Mediterranean mean sea level to atmospheric pressure and comparison with the Black Sea (Solicited Paper)
- 14:30 **PLAG, H.-P.**  
Interannual to decadal sea-level variations in the Mediterranean
- 14:50 **RUF, P.; PLAG, H.-P.**  
Mediterranean sea-level variations forced by air pressure
- 15:10 **CAZENAVE, A.; DOMINH, K.; GENNERO, M.C.; MERCIER, F.; BONNEFOND, P.**  
Present-day sea level changes in the Mediterranean and Black seas from satellite altimetry
- 15:30 **ZERBINI, S.; NEGUSINI, M.; DI CORI, M.; TONTI, G.**  
High-precision determination of vertical crustal movements in the framework of the SELF II project (Solicited Paper)
- 16:00 **PAVLIS, E.C.; MERTIKAS, S.; KOUROUMBALI, F.; DRAKOPOULOS, P.G.**  
Sea-level monitoring with CRETE: Crete Regional Tectonic Experiment
- 16:20 **TINTI, S.; BORTOLUCCI, E.**  
Coastal hazard in the Mediterranean Sea due to storm surges and tsunamis
- 16:40 **END OF SESSION**

## G9 Atmospheric sounding with GPS

Convener: Blewitt, G.  
Co-Convener(s): Niell, A.E.  
**Wednesday, 22 April 1998**  
Lecture Room: R7  
Chairperson: N.N.

- 08:30 **FANG, P.; BOCK, Y.**  
A sliding-window procedure for super near real-time continuous GPS water vapor estimation using predicted orbits
- 08:45 **BAR-SEVER, Y.E.**  
GPS-based estimation of tropospheric moisture gradients
- 09:00 **NIELL, A.E.; COSTER, A.J.; SOLHEIM, F.S.; MENDES, V.B.; TOOR, P.C.; LANGLEY, R.B.; UPHAM, C.A.**  
Measurements of water vapor in the atmosphere: comparison of radiosonde, water vapor radiometer, GPS, and VLBI
- 09:15 **DODSON, A.H.; BAKER, H.C.; BUERKI, B.; ELGERED, G.; RIUS, A.; ROTHACHER, M.**  
The WAVEFRONT project on GPS water vapour estimation
- 09:30 **BECKER, M.; FRANKE, P.; KOEPKEN, C.; WEBER, G.**  
Usage of GREF-permanent network results for geodesy and meteorology
- 09:45 **SYNDERGAARD, S.; HOEG, P.**  
On the ionosphere calibration in atmospheric limb sounding
- 10:00 **JAKOWSKI, N.; FICKERT, J.; WEHRENPENNIG, A.; REIGBER, CH.; FÖRSTE, CH.; KÖNIG, R.**  
Atmosphere/ionosphere sounding using GPS radio occultation measurements onboard CHAMP
- 10:15 **KORNBLUEH, L.; GORBUNOV, M.; BENGTTSSON, L.**  
Simulation of full data assimilation cycle comparison
- 10:30 **FOELSCH, U.; KIRCHENGAST, G.**  
Atmospheric imaging involving GNSS occultation: a quantitative study
- 10:45 **KIRCHENGAST, G.; RAMSAUER, J.; MÜHLMANN, W.; HOLLER, G.; HOLLER, K.; HOCKE, K.; STEINER, A.; FOELSCH, U.; SYNDERGAARD, S.; MORTENSEN, M.; HOEG, P.; SCHULTZ, K.; HANSEN, D.; MARESI, L.; SILVESTRIN, P.; FUCHS, J.; TOBIAS, A.**  
An end-to-end occultation sounding simulator: overview and exemplary results
- 11:00 **AL BAYARI, O.; CAPRA, A.; MANCINI, F.; VITTUARI, L.**  
The effect of TEC on Antarctica GPS measurements
- 11:15 **END OF SESSION**
- 12:00 **Business Meetings**



## G9 Atmospheric sounding with GPS - Poster Session

Convener: Blewitt, G.

Co-Convener(s): Niell, A.E.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 2 - G

- G002 KUNITSYN, V.E.; ZAKHAROV, V.I.  
Multipath influence on atmosphere - ionosphere profiling
- G003 SHAGIMURATOV, I.I.; EPHISHOV, I.I.;  
BARAN, L.W.  
Analysis of TEC variation from GPS measurements
- G004 CALAIS, E.; MINSTER, J.B.; HOFTON, M.A.;  
HEDLIN, M.A.H.  
Ionospheric signature of surface mine blasts from global positioning system measurements

## G10 Satellite and airborne gravimetric and altimetric techniques - Poster Session

Convener: Forsberg, R.

Co-Convener(s): Haagmans, R.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 2 - G

- G005 KNUDSEN, P.; ANDERSEN, O.B.  
Recovery of the global marine gravity field from multi mission satellite altimetry
- G006 HERNANDEZ, F.; SCHAEFFER, P.; LE  
TRAON, P.-Y.; MERTZ, F.; BAHUREL, P.  
A mean sea surface dedicated to ocean studies: global estimation
- G007 OLESEN, A.; FORSBERG, R.; BASTOS, L.;  
GISKEHAUG, A.; HEHL, K.; MEYER, U.;  
TIMMEN, L.  
High-resolution airborne gravity survey of Skagerrak

## G10 Satellite and airborne gravimetric and altimetric techniques

Convener: Forsberg, R.

Co-Convener(s): Haagmans, R.

Friday, 24 April 1998

Lecture Room: R7

Chairperson: Forsberg, R.

- 11:00 PAVLIS, N.K.; WANG, Y.M.; CHINN, D.S.; COX,  
C.M.; LEMOINE, F.G.  
Introduction of ocean circulation model information in global geopotential solutions: preliminary results
- 11:15 WANG, Y.M.  
The computation of mean sea surface and marine gravity anomalies using satellite altimeter data from TOPEX/POSEIDON, ERS-1 and GEOSAT missions
- 11:30 RENTSCH, M.; ANZENHOFER, M.; GRUBER,  
TH.; NEUMAYER, K.H.  
Altimetric gravity anomalies based on GEOSAT and ERS-1 geodetic mission data

- 11:45 VILLARES, P.; CATALAN P.U., M.; ROJAS, J.L.;  
CATALAN, M.; GOMEZ-ENRI, J.; CAMACHO,  
J.C.  
Altimetric study of sea level variation on the Mediterranean along ERS and TOPEX campaigns

- 12:00 MCADOO, D.C.; LAXON, S.; CHILDERS, V.A.  
Assessment of gravity from ERS altimetry and airborne gravimetry in polar seas

- 12:15 DEGNAN, J.; MCGARRY, J.  
Feasibility study of multikilohertz spaceborne microlaser altimeters

- 12:30 SELIG, A.; HOYNG, P.; KOOP, R.; VISSER, P.;  
SNEEUW, N.  
Development of the end-to-end closed loop simulation facility for ESA's gravity explorer GOCE

- 12:45 COLOMBO, O.L.; HUSTI, G.J.; DAMHUIS, A.A.  
The Europlatform experiment: testing precise, long-range kinematic GPS for remote-sensing

- 13:00 LUNCH

- Chairperson: Colombo, O.

- 14:00 FORSBERG, R.; OLESEN, A.; BASTOS, L.;  
GISKEHAUS, A.; HEHL, K.; BOEBEL, T.;  
MEYER, U.; NESEMANN, M.; XU, G.; TIMMEN,  
L.  
Geoid and sea-surface topography determination by airborne techniques

- 14:15 BRUTON, A.M.; GLENNIE, C.L.; SCHWARZ,  
K.P.  
Aircraft acceleration from GPS for airborne gravimetry: a comparison of techniques

- 14:30 BASTOS, L.; CUNHA, S.; TIMMEN, L.;  
NESEMANN, M.; XU, G.; BOEBEL, T.; MEYER,  
U.; FORSBERG, R.; OLESEN, A.V.;  
GIDSKEHAUG, A.; HEHL, K.  
Airborne gravimetry and altimetry campaign in the Azores region

- 14:45 BOEDECKER, G.  
Comparison of various configurations of accelerometers for strapdown airborne gravimetry

- 15:00 BASTOS, L.; BOEBEL, T.; CUNHA, S.;  
FORSBERG, R.; GIDSKEHAUG, A.; HEHL, K.;  
MEYER, U.; MILLER, H.; NESEMANN, M.;  
OLESEN, A.V.; TIMMEN, L.; XU, G.  
Airborne gravimetry and altimetry in north Greenland and Fram strait - NORDGRAV'97

- 15:15 GLENNIE, C.L.; BRUTON, A.M.; SCHWARZ,  
K.P.; WEI, M.; TENNANT, K.  
Geoid referenced elevation models and ortho-rectified image maps from synthetic aperture radar

- 15:30 END OF SESSION

---

## Journal of Geodynamics

The interdisciplinary journal for solid earth research in geodetic, geophysical, geological and geochemical geodynamics, in particular of large scale processes.

---

## G11 Recent advances in precise geoid determination methodology

Convener: Tziavos, I.N.  
Co-Convener(s): Vermeer, M.  
**Tuesday, 21 April 1998**  
Lecture Room: R8  
Chairperson: Tziavos, I.N.  
Editors: Tziavos, I.N.; Vermeer, M.

09:00 HOLOTA, P.

G11-001 Variational methods in geoid determination and function bases (Solicited Paper)

09:30 KELLER, W.

G11-002 Local geoid determination by wavelet-vaguelette decomposition (Solicited Paper)

10:00 ARABELOS, D.; TSCHERNING, C.C.

G11-003 Gravity field recovery from airborne gravity gradiometer data using collocation and taking into account systematic errors

10:20 SUN, W.; SJÖBERG, L.E.

G11-004 A new global topographic-isostatic model

10:40 BREAK

Chairperson: Arabelos, D.

Editors: Tziavos, I.N.; Vermeer, M.

11:10 BLITZKOW, D.

G11-005 Toward a 10' resolution geoid for South America: a comparison study (Solicited Paper)

11:40 PAVLIS, N.K.

G11-006 Modelling of long wavelength systematic errors in surface gravimetric data

12:00 DAHL, O.C.; FORSBERG, R.

G11-007 Different ways to handle topography in practical geoid determination

12:20 LEHMANN, R.

G11-008 Studies on the altimetry-gravimetry problems for geoid determination

12:40 ABD-ELMOTAAL, H.; KÜHTREIBER, N.

G11-009 Improving the geoid accuracy by adopting the reference field

13:00 LUNCH

Chairperson: Vermeer, M.

Editors: Tziavos, I.N.; Vermeer, M.

14:00 ZHANG, K.

G11-010 On the determination of a new Australian geoid

14:20 DUQUENNE, H.; HAMEL, M.

G11-011 Comparison and combination of a gravimetric geoid with a levelled GPS dataset by statistical analysis

14:40 BASIC, T.; BRKIC, M.

G11-012 A new, more accurate geoid for Croatia

15:00 ZHANG, K.; FEATHERSTONE, W.E.; DING, X.L.

G11-014 An accuracy estimation of gravimetric terrain corrections (Poster)

15:10 DUQUENNE, H.

G11-015 QGF98, a new solution for the gravimetric quas-geoid in France (Poster)

15:20 BARLIK, M.

G11-016 Investigations of the Earth figure by gradientometric determinations (Poster)

15:30 KENYERES, A.

G11-017 The completion of the nationwide GPS-gravimetric geoid solution for Hungary (Poster)

15:40 TZIAVOS, I.N.; ANDRITSANOS, V.D.

G11-018 Recent geoid computations for the Hellenic area (Poster)

15:50 FIANI, M.; SANNA, G.

G11-019 An estimation of Sardinia Island geoid by analysis of GPS/leveling data (Poster)

16:00 Concluding Remarks

16:30 END OF SESSION

## G11 Recent advances in precise geoid determination methodology - Poster Session

Convener: Tziavos, I.N.

Co-Convener(s): Vermeer, M.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: AGORA 2 - G

Chairperson: Vermeer, M.

Editors: Tziavos, I.N.; Vermeer, M.

G070 ZHANG, K.; FEATHERSTONE, W.E.; DING, X.L.

G11-014 An accuracy estimation of gravimetric terrain corrections

G071 DUQUENNE, H.

G11-015 QGF98, a new solution for the gravimetric quas-geoid in France

G072 BARLIK, M.

G11-016 Investigations of the Earth figure by gradientometric determinations

G073 KENYERES, A.

G11-017 The completion of the nationwide GPS-gravimetric geoid solution for Hungary

G074 TZIAVOS, I.N.; ANDRITSANOS, V.D.

G11-018 Recent geoid computations for the Hellenic area

G075 FIANI, M.; SANNA, G.

G11-019 An estimation of Sardinia Island geoid by analysis of GPS/leveling data

## G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)

### .1 Effects of the atmosphere - Poster Session

Convener: Gegout, P.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: AGORA 2 - G

Chairperson: Salstein, D.A.

G076 HÖPFNER, J.

Seasonal length-of-day changes and axial atmospheric-angular-momentum oscillations in their temporal variability

G077 SCHMITZ-HÜBSCH, H.; BOSCH, W.

Wavelet analysis of polar motion and angular momentum time series

- G078 **ABARCA DEL RIO, R.; GAMBIS, D.**  
Interannual and decadal time scales in the Earth rotation (LOD), atmospheric mountain stress torques (AMST) and the atmospheric angular momentum (AAM)
- G078A **DE VIRON, O.; DEHANT, V.**  
Comparison between torque and AAM approaches in order to compute the effect of a superficial fluid layer \*

**G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
**.1 Effects of the atmosphere**

Convener: Gegout, P.  
**Friday, 24 April 1998**  
Lecture Room: R5  
Chairperson: Gegout, P.

- 14:00 **MARCUS, S.; GHIL, M.**  
Tropical and extratropical excitation of subseasonal variations in the Earth's rotation rate (Solicited Paper)
- 14:30 **WEICKMANN, K.; ROBINSON, W.; SARDESHMUKH, P.; HART, J.**  
Intraseasonal oscillations in global atmospheric angular momentum (Solicited Paper)
- 15:00 **ELBERSKIRCH, J.; HENSE, A.**  
Atmospheric angular momentum variability and associated atmospheric patterns on different timescales simulated with the ECHAM3 T21 GCM
- 15:15 **SALSTEIN, D.A.; ROSEN, R.D.**  
Interannual signals in atmospheric angular momentum from a 40-year reanalysis (Solicited Paper)
- 15:45 **BREAK**

Chairperson: Gegout, P.

- 16:00 **GEGOUT, P.; MARCUS, S.; DICKEY, J.; CHAO, Y.**  
Angular momentum exchanges between the Earth and the hydrosphere and consequent length of day variations
- 16:15 **PETROV, S.; BRZEZINSKI, A.; BIZOUARD, C.**  
Atmospheric excitation of prograde diurnal polar motion
- 16:30 **NASTULA, J.; SALSTEIN, D.A.**  
Atmospheric regional signals in excitations of polar motion - analysis over a 40 year period
- 16:45 **ABARCA DEL RIO, R.**  
Influence of the hydrological cycle on the seasonal cycle of Earth rotation and gravitational parameters
- 17:00 **BRZEZINSKI, A.; BIZOUARD, C.; PETROV, S.**  
Atmospheric and oceanic effects on nutation of the Earth (Solicited Paper)
- 17:30 **BIZOUARD, C.; PETROV, S.D.; BRZEZINSKI, A.**  
Atmospheric and oceanic contributions to the long periodic components of nutation
- 17:45 **HÖPFNER, J.**  
Seasonal length-of-day changes and axial atmospheric-angular-momentum oscillations in their temporal variability
- 17:50 **SCHMITZ-HÜBSCH, H.; BOSCH, W.**  
Wavelet analysis of polar motion and angular momentum time series

- 17:55 **ABARCA DEL RIO, R.; GAMBIS, D.**  
Interannual and decadal time scales in the Earth rotation (LOD), atmospheric mountain stress torques (AMST) and the atmospheric angular momentum (AAM)
- 18:00 **DE VIRON, O.; DEHANT, V.**  
Comparison between torque and AAM approaches in order to compute the effect of a superficial fluid layer \*
- 18:05 **END OF SESSION**

**G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
**.2 Effects of the ocean - Poster Session**

Convener: Sündermann, J.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 2 - G

- G080 **NASTULA, J.; PONTE, R.; SALSTEIN, D.A.**  
Combined oceanic and atmospheric excitation of polar motion for the period 1993-1995

**G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
**.2 Effects of the ocean**

Convener: Sündermann, J.  
**Friday, 24 April 1998**  
Lecture Room: R5  
Chairperson: Sündermann, J.

- 11:00 **MÖRNER, N.-A.**  
The hydrosphere's impact on Earth rotation (Solicited Paper)
- 11:30 **HAAS, R.; SCHERNECK, H.-G.**  
Effect of ocean loading on the determination of Earth orientation parameters
- 11:45 **PONTE, R.M.**  
Understanding the ocean's role on the variable Earth rotation (Solicited Paper)
- 12:15 **THOMAS, M.**  
On the consideration of ocean tides in an AGCM and implications on Earth's rotation
- 12:30 **JOHNSON, T.J.**  
The role of ocean variability in the Earth's rotation: a geodetic application for the Parallel Ocean Climate Model
- 12:45 **NASTULA, J.; PONTE, R.; SALSTEIN, D.A.**  
Combined oceanic and atmospheric excitation of polar motion for the period 1993-1995
- Stand-by paper:  
**SÜNDERMANN, J.**  
Ocean tides and history of the Earth-Moon system \*

12:50 **END OF SUB-SESSION**

---

**Attend the Poster Session**

---

**G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
**.3 Effects of the core - Poster Session**

Convener: Dehant, V.M.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 2 - G

Chairperson: Salstein, D.A.

- G079 GREINER-MAI, H.; JOCHMANN, H.;  
 BARTHELMES, F.  
 About the influence of a possible relative rotation of the Earth's inner core on the polar motion, the geomagnetic field and the gravity field

**G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
**.3 Effects of the core**

Convener: Dehant, V.M.

Friday, 24 April 1998

Lecture Room: R5

Chairperson: Dehant, V.M.

- 08:30 MATHEWS, P.M.; BUFFETT, B.A.; HERRING, T.A.  
 Earth rotation and core modelling: couplings of the mantle, outer core, and inner core (Solicited Paper)
- 09:00 JAULT, D.; WICHT, J.  
 Axial torques acting between core and mantle (Solicited Paper)
- 09:30 ZATMAN, S.A.  
 When are the core and mantle coupled?
- 09:45 GETINO, J.; FERRANDIZ, J.M.  
 Geophysical parameters derived from the Hamiltonian non-rigid Earth theory
- 10:00 DEHANT, V.; DEFRAIGNE, P.; VAN HOOLST, T.  
 About the influence of the core on nutations: a beginning
- 10:15 GREINER-MAI, H.; JOCHMANN, H.;  
 BARTHELMES, F.  
 About the influence of a possible relative rotation of the Earth's inner core on the polar motion, the geomagnetic field and the gravity field
- 10:20 END OF SUB-SESSION

**G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
**.4 Models, measurements and analysis of Earth rotation**

Convener: Schuh, H.

Thursday, 23 April 1998

Lecture Room: R5

Chairperson: Schuh, H.

- 14:00 GREFF-LEFFTZ, M.  
 Theory of the Earth's rotation at different time-scales (Solicited Paper)

- 14:30 CHAO, B.F.  
 Angular momentum variations in the geophysical fluids (Solicited Paper)
- 15:00 VONDRAK, J.  
 Long series of Earth rotation parameters after reanalysis within the Hipparcos frame (Solicited Paper)
- 15:30 WEBER, R.; ROTHACHER, M.; SPRINGER, T.  
 Monitoring Earth rotation variations by GPS (Solicited Paper)
- 16:00 GIBERT, D.; HOLSCHNEIDER, M.; LEMOUEL, J.L.  
 Wavelet analysis of the polar motion
- 16:15 DILL, R.; DREWES, H.; RICHTER, B.; SCHUH, H.  
 Influence of global mass displacements on Earth rotation
- 16:30 GIPSON, J.; MA, C.  
 Signatures of ENSO in LOD
- 16:45 KOTRELEVA, O.V.; KOSEK, W.; KOLACZEK, B.  
 Time variable spectrum of the free-core nutation
- 16:50 END OF SUB-SESSION

**G12 Effects of the atmosphere, ocean and core on nutation, polar motion and length of day (co-sponsored by SE)**  
**.4 Models, measurements and analysis of Earth rotation - Poster Session**

Convener: Schuh, H.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 2 - G

- G080A KOTRELEVA, O.V.; KOSEK, W.;  
 KOLACZEK, B.  
 Time variable spectrum of the free-core nutation
- G080B TITOV, O.  
 Subdiurnal variations of EOP from VLBI data

**G14 Contribution of permanent geodetic network to Earth Science in Europe**

Convener: Calais, E.

Co-Convener(s): Ambrosius, B.A.C.

Tuesday, 21 April 1998

Lecture Room: R7

Chairperson: Noomen, R.

- 09:00 KAUFMAN, M.; OXENTIOUK, A.; SINENKO, L.;  
 YUNOSHEV, L.; ZALYTSKY, V.  
 Investigation of specific periods for crustal loading effects on GPS base "Mendeleevo-Irkutsk"
- 09:20 POUTANEN, M.  
 The seven-year history of the Baltic Sea level GPS campaigns
- 09:40 JOHANSSON, J.M.; SCHERNECK, H.-G.;  
 ELGERED, G.; EMARDSON, T.R.; DARIN, C.-F.;  
 DAVIS, J.L.  
 Continuous monitoring of Earth atmosphere and crustal deformation using GPS

- 10:00 **SCHERNECK, H.-G.**; JOHANSSON, J.M.; DAVIS, J.L.; MITROVICA, J.X.  
BIFROST project: horizontal and vertical crustal motion in Fennoscandia from 1500 days of continuous GPS observations
- 10:20 **BREAK**

Chairperson: Ambrosius, B.A.C.

- 11:00 **BRUYNINX, C.**  
Using the EUREF permanent GPS network to detect deformations within the Eurasian plate
- 11:20 **NOOMEN, R.**; LOOHUIS, J.  
Three-dimensional crustal deformations in Europe observed with space geodesy
- 11:40 **CALAIS, E.**; BARLIER, F.; BAYER, R.; CHERY, J.; BOUCHER, C.; COTON, F.; DERVIN, P.; JOUANNE, F.; MANZINO, A.; MARTINOD, J.; RAMEL, C.; VIGNY, C.  
A permanent GPS network for monitoring crustal deformation in the western Alps
- 12:00 **MERTIKAS, S.**; PAVLIS, E.C.; KARALLOTIS, A.; FRANTZIS, X.; MBARTZOS, E.  
First observations from Crete Regional Tectonic Experiment (CRETE)
- 12:20 **ANDERSEN, P.H.**  
Combination of VLBI, GPS and SLR observations at the observation level - first results
- 12:40 **SLEEWAEAGEN, J.-M.**  
Phase surge anomalies: description, origin and solution
- 13:00 **LUNCH**

Chairperson: Bruyninx, C.

- 14:00 **WEBB, F.H.**; HEFLIN, M.B.; HURST, K.; WATKINS, M.M.; ZUMBERGE, J.F.  
Implementation of GPS for the analysis of large continuous GPS networks
- 14:20 **MULS, A.**; SLEEWAEAGEN, J.-M.; BRUYNINX, C.; WARNANT, R.  
The redesign of the Belgian permanent GPS network for future (near) real-time applications
- 14:40 **KOIVULA, H.**; OLLIKAINEN, M.; POUTANEN, M.  
Use of the Finnish permanent GPS network in postglacial rebound studies
- 15:00 **ASHKENAZI, V.**; BAKER, H.C.; BINGLEY, R.M.; DODSON, A.H.; PENNA, N.T.; BAKER, T.F.; GREENAWAY, R.G.; NURSEY, K.; BEDLINGTON, D.; OFFILER, D.; JERRETT, D.  
The establishment of a permanent geodetic network in the UK
- 15:20 **FERMI, M.**; FERRARO, C.; NARDI, A.; PACIONE, R.; VESPE, F.  
The Italian GPS Fiducial Network in Italy, present status and future development (Solicited Paper)
- 16:00 **DAVILA, J.M.**; GARATE, J.; BERROCOZO, M.  
South Spain-north Africa geodynamic GPS network
- 16:20 **BOCK, Y.**; HUDNUT, K.; PRESCOTT, W.; WATKINS, M.; AGNEW, D.; GALTEZKA, J.; KING, N.; MCRANEY, J.; SCHEID, J.; WEBB, F.; WYATT, F.; YOUNG, W.  
The southern California integrated GPS network (Solicited Paper)
- 17:00 **END OF SESSION**

## **G14 Contribution of permanent geodetic network to Earth Science in Europe - Poster Session**

Convener: Calais, E.

Co-Convener(s): Ambrosius, B.A.C.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Tuesday, 17:30 - 19:00**

Poster Area: AGORA 2 - G

Chairperson: Calais, E.

- G017 **REIGBER, CH.**; GENDT, G.; LECHNER, W.  
OWAG-B: a pilot project for operational water vapour estimation in a dense German ground-based GPS network
- G018 **PERIN, B.**; SHIVER, W.  
University NAVSTAR consortium (UNAVCO) facility support to permanent Global Positioning System (GPS) network installation and operation
- G019 **MALKIN, Z.**; SPRINGER, T.; POUTANEN, M.  
On BSL'93 combined GPS solution
- G020 **BARAN, L.W.**; KAPCIA, J.; KRANKOWSKI, A.; WIELGOSZ, P.; SHAGIMURATOV, I.I.  
Activity of the Lamkowko IGS permanent station
- G021 **WEBER, R.**; TITZ, H.  
SATVB - a multipurpose GPS-reference station network in Austria
- G022 **PEERI, S.**; WDOWINSKI, S.  
Continuous monitoring of crustal deformation along the Dead Sea Fault utilizing a permanent GPS network
- G023 **ZHAGARS, Y.**; KAMINSKIS, J.  
The new geodynamic site in Latvia LV-04 (Irbene) converted Russian ex-military object
- G024 **CAMPBELL, J.**; NOTHNAGEL, A.; SORGENTE, M.  
The regional VLBI-network for measurement of crustal motion in Europe - status and results
- G025 **BECKER, M.**; FRANKE, P.; SCHLÜTER, W.; SEEGER, H.; WEBER, G.  
Status and performance of the German permanent GPS network GREF-permanent
- G026 **SMITH, D.E.**; KOLENKIEWICZ, R.; DUNN, P.J.; TORRENCE, M.H.  
Mixed geodetic networks for Earth sciences
- G027 **VAN DER MAREL, H.**; DE JONG, C.D.  
Active GPS reference system for the Netherlands

## **G15 Instrumental challenges in geodesy**

Convener: Tomasi, P.

Co-Convener(s): Bianco, G.; Degnan, J.J.; Wilson, C.R.

**Monday, 20 April 1998**

Lecture Room: R7

Chairperson: Tomasi, P.

Editors: Degnan, J.J.; Tomasi, P.

- 09:00 **BONNEFOND, P.**; EXETIER, P.; BOUDON, Y.;  
G15-001 **LAURAIN, O.**; BARLIER, F.  
Monitoring SLR range biases from multi-satellite long time series of laser residuals
- 09:15 **VASSILIEV, V.P.**; BURMISTROV, V.B.;  
G15-002 **SHARGORODSKY, V.D.**  
A satellite for submillimeter-accuracy SLR
- 09:30 **RIEPL, ST.**; **SCHREIBER, U.**; **SCHLÜTER, W.**  
G15-003  
Atmospheric correction from dual color SLR

- 09:45 DEGNAN, J.; MCGARRY, J.; ZAGWODZKI, T.  
G15-004 Advanced NASA research and development in satellite laser ranging
- 10:00 SCHREIBER, U.; SCHNEIDER, M.; STEDMAN, G.; ROWE, C.; COOPER, S.; SCHLÜTER, W.; SEEGER, H.  
G15-005 The CII Ring Laser project
- 10:15 MENDES, V.B.; LANGLEY, R.B.  
G15-006 An analysis of high-accuracy tropospheric delay mapping functions
- 10:30 BREAK

Chairperson: Degnan, J.J.  
Editors: Degnan, J.J.; Tomasi, P.

- 11:00 MERTIKAS, S.; TSAKIRI, M.; PAVLIS, E.C.  
G15-007 Quality control challenges in GPS positioning arrays
- 11:15 TIBERIUS, C.; KENSELAAR, F.  
G15-008 An analysis of the stochastic model of GPS observables
- 11:30 SCHUH, H.; SCHWEGMANN, W.  
G15-009 First steps towards real-time VLBI
- 11:45 PETROV, L.  
G15-010 Usage of phase delay measurements produced by VLBI for geodetic applications
- 12:00 GRATCHEV, V.G.; IPATOV, A.V.; KOLTISOV, N.E.  
G15-011 Testing of VLBI site data acquisition and registration equipment with a correlator use
- 12:15 CANNON, W.H.; FEIL, G.; FEIR, B.; NEWBY, P.; NOVIKOV, A.; DEWDNEY, P.; CARLSON, B.; POPELAR, J.; PETRACHENKO, W.T.; KLATT, C.; BERUBE, M.  
G15-012 The S2 VLBI system
- 12:30 LUNCH

Chairperson: Tomasi, P.  
Editors: Degnan, J.J.; Tomasi, P.

- 14:00 SCHLÜTER, W.; BÖER, A.; DASSING, R.; HASE, H.; SEEGER, H.; SPERBER, P.; KILGER, R.  
G15-013 Transportable integrated geodetic observatory TIGO as a realisation of a new fundamental station
- 14:15 BEDRICH, S.; FLECHTNER, F.; TEUBEL, A.  
G15-014 Accuracy verification of PRARE measurement data and calibration techniques
- 14:30 SNOW, R.W.; RUTLEDGE, D.R.  
G15-015 Increasing automation of GPS/GLONASS reference stations with Ashtech's geodetic base station software (Poster)
- 14:35 KUNIMORI, H.; YOU, Z.; PROCHAZKA, I.; HAMAL, K.  
G15-016 The on-site diagnostics and accuracy improvement of satellite laser ranging stations using portable calibration standard (Poster)
- 14:40 VASSILIEV, V.P.; SHARGORODSKY, V.D.  
G15-017 A new approach to the problem of a transportable eye-safe SLR station for high-accuracy measurements (Poster)
- 14:45 KIRCHNER, G.; KOIDL, F.  
G15-018 Time walk compensation and satellite signature reduction with SPADs (Poster)
- 14:50 HAUSLEITNER, W.; APPLEBY, G.; SINCLAIR, A.  
G15-019 The EUROLAS stations as an effective satellite tracking cluster (Poster)

- 14:55 IPATOV, A.V.; KOLTISOV, N.E.; TSAREV, V.I.  
G15-020 Multichannel software controlled radiometer for radiotelescope in S. Svetloye (Poster)
- 15:00 KIUCHI, H.; KONDO, T.; SEKIDO, M.; KOYAMA, Y.; IMAE, M.  
G15-021 Real-time VLBI system for the Key Stone Project (Poster)

#### Techniques for Earth observation

- 15:05 MA, C.; RYAN, J.W.  
G15-022 Inherent accuracy of 24-hr VLBI EOP measurements derived from two simultaneously observing networks
- 15:20 SMITH, G.R.; HEYWOOD, D.I.  
G15-023 Using ephemeris information from GPS signatures to improve thematic mapping in mountain environments: a conceptual proposal
- 15:35 WEWEL, F.; JAUMANN, R.; BRAND, M.; NEUKUM, G.; SCHOLTEN, F.  
G15-024 High resolution acquisition of topographic surfaces with the High Resolution Stereo Camera (HRSC) (Poster)
- 15:40 BERRY, P.A.M.; BRON, E.  
G15-025 Independent validation of the globe global digital elevation model using satellite altimetry
- 15:55 TOMASI, P.  
Concluding Remarks
- 16:10 END OF SESSION
- 17:00 Opening
- 19:30 Reception

#### **G15 Instrumental challenges in geodesy - Poster Session**

Convener: Tomasi, P.  
Co-Convener(s): Bianco, G.; Degnan, J.J.; Wilson, C.R.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - G  
Chairperson: Tomasi, P.  
Editors: Degnan, J.J.; Tomasi, P.

- G008 SNOW, R.W.; RUTLEDGE, D.R.  
G15-015 Increasing automation of GPS/GLONASS reference stations with Ashtech's geodetic base station software
- G009 KUNIMORI, H.; YOU, Z.; PROCHAZKA, I.; HAMAL, K.  
G15-016 The on-site diagnostics and accuracy improvement of satellite laser ranging stations using portable calibration standard
- G010 VASSILIEV, V.P.; SHARGORODSKY, V.D.  
G15-017 A new approach to the problem of a transportable eye-safe SLR station for high-accuracy measurements
- G011 KIRCHNER, G.; KOIDL, F.  
G15-018 Time walk compensation and satellite signature reduction with SPADs
- G012 HAUSLEITNER, W.; APPLEBY, G.; SINCLAIR, A.  
G15-019 The EUROLAS stations as an effective satellite tracking cluster
- G013 IPATOV, A.V.; KOLTISOV, N.E.; TSAREV, V.I.  
G15-020 Multichannel software controlled radiometer for radiotelescope in S. Svetloye

- G014 KIUCHI, H.; KONDO, T.; SEKIDO, M.;  
G15-021 KOYAMA, Y.; IMAE, M.  
Real-time VLBI system for the Key Stone Project
- G015 WEWEL, F.; JAUMANN, R.; BRAND, M.;  
G15-024 NEUKUM, G.; SCHOLTEN, F.  
High resolution acquisition of topographic surfaces with the High Resolution Stereo Camera (HRSC)

## G16 Geodetic and geodynamic achievements of the CEI (Central European Initiative)

Convener: Sledzinski, J.  
Co-Convener(s): Kosteletzky, J.  
**Monday, 20 April 1998**  
Lecture Room: R10  
Chairperson: Czarnecki, K.

- 08:30 SLEDZINSKI, J.  
Current status of realisation of scientific programmes in geodesy and geodynamics of the CEI sixteen countries
- 08:45 FRANKE, P.; IHDE, J.; SCHLÜTER, W.;  
SEEGER, H.; WEBER, G.  
The contribution of the EUREF- and EUVN-GPS-campaigns to the maintenance of the geodetic reference system in central Europe (Solicited Paper)
- 09:15 FEJES, I.; GHITAU, D.; MARCHESINI, C.;  
MOJZES, M.; PESEC, P.; REINHART, E.; SIMEK, J.; SLEDZINSKI, J.; SOLARIC, M.; VODOPIVEC, F.; ZABLOTSKI, F.  
The Central Europe Geodynamics Oproject (CERGOP): main achievements 1995-1998
- 09:30 STANGL, G.  
The GPS campaigns of CERGOP - combined products of 1994-1997
- 09:45 FERMI, M.; FERRARO, C.; NARDI, A.;  
PACIONE, R.; VESPE, F.  
Analysis of a sub-network of stations from 4 years of CERGOP GPS campaigns
- 10:00 HEFTY, J.  
Estimate of site velocities from CEGRN GPS campaigns referred to CERGOP reference frame
- 10:15 ROGOWSKI, J.B.; FIGURSKI, M.  
CERGOP as a regional network for the maintenance of the EUREF reference frame
- 10:30 BREAK

Chairperson: Fejes, I.

- 11:00 BECKER, M.; GHITAU, D.; MARCU, C.;  
NEUMAIER, P.; RADULESCU, F.; REINHART, E.; ROSCA, V.; RUS, T.; SEEGER, H.  
Plate kinematic studies in Romania using GPS
- 11:15 BOSY, J.; KONTNY, B.  
Strategy of GPS data processing in local geodynamical networks
- 11:30 CACON, S.; KONTNY, B.; BOSY, J.  
Recent geodynamics of eastern Sudety mountains and Sudety foreland
- 11:45 PESEC, P.  
Permanent GPS stations in central Europe for precise (real-time) positioning
- 12:00 CZARNECKI, L.; JANAK, J.; MOJZES, M.  
Tatra mountains without borders

- 12:15 BOGUSZ, J.; KRUCZYK, M.; KUJAWA, L.;  
KURKA, W.; PIRASZEWSKI, M.; ROGOWSKI, J.B.; SLEDZINSKI, J.; FIGURSKI, M.  
Contribution of astro-geodetical observatory in Jozefoslaw to EUREF and geodynamical studies in central Europe
- 12:30 REINHART, E.; RICHTER, B.; WILMES, H.;  
SLEDZINSKI, J.; MARSON, I.; ERKER, E.; RUESS, D.; KAKKURI, J.; MAKINEN, J.  
Unification of gravity systems of central and eastern European countries - unigrace
- 12:45 KOSTELECKY, J.; ZEMAN, A.  
Geometrical interpretation of the quasigeoid on the territory of the Czech Republic
- 13:00 LUNCH

Chairperson: Hefty, J.

- 14:00 SIMEK, J.  
Some characteristics of detailed gravity field for the territory of the Czech Republic and their geophysical implications
- 14:15 BORZA, T.; KENYERES, A.  
Realization of the Hungarian national GPS network
- 14:30 BARAN, P.; CHERNOCON, V.;  
CHEREMSHYNSKY, M.  
Some experience of GPS applications for constructions monitoring \*
- 14:45 OSZCZAK, S.  
Present status of establishment of navigation DGPS systems in European countries
- 15:00 VODOPIVEC, F.; CZARNECKI, K.  
Attempts at upgrading university education standards in the CEI countries
- 15:15 DOLGOPOLOW, A.; WOLSKI, A.  
Application DGPS system for surveys of hydrotechnical objects (Poster)
- 15:19 FELSKI, A.; SPECHT, C.  
DGPS on the Baltic Sea - the hydrographic experience (Poster)
- 15:23 SZYMONSKI, M.  
Some notes on the future navigation satellite system architecture for marine purposes (Poster)
- 15:27 CZARNECKI, K.; FELLNER, A.; JAFERNIK, H.;  
OLSZEWSKI, R.; ROGOWSKI, J.; SLEDZINSKI, J.  
RTK-DGPS for military and civil aviation in Poland (Poster)
- 15:31 BOGUSZ, J.; KUJAWA, L.; KURKA, W.;  
PIRASZEWSKI, M.; ROGOWSKI, J.B.; DOBROWOLSKI, A.; LESZCZYNSKI, W.; SZOLUCHA, M.  
Application of GPS technology to the environmental studies (Poster)
- 15:35 KUJAWA, L.  
Comparison of different types of GPS receivers and antennas (Poster)
- 15:39 SLEDZINSKI, J.  
Six GPS campaigns of the project EXTENDED SAGET (Poster)
- 15:43 SLEDZINSKI, J.; VYSKOCIL, P.  
Monographs on geodynamics of a part of CEI territory (Poster)

\* not included in the Book of Abstracts

- 15:47 **KALINOWSKA-SLEDZINSKA, B.**; **BARLIK, M.**; **CZARNECKI, K.**; **MARGANSKI, S.**; **PACHUTA, A.**; **WALO, J.**  
Use of GPS measurements for determination of gravimetric topographic correction (Poster)
- 15:51 **BOGUSZ, J.**  
Instrumental phase lag determination in Polish tidal stations (Poster)
- 15:55 **BARLIK, M.**  
Incorporation of the vertical gravity gradient observations to the determination of separation between geoid and quasigeoid on Poland territory (Poster)
- 15:59 **FERRARO, L.**; **MARJANOVIC, M.**; **MERVART, L.**; **BECKER, M.**; **RUS, T.**; **PANY, T.**; **STANGL, G.**; **KENYERES, A.**; **HEFTY, J.**; **ROGOWSKI, J.B.**; **FIGURSKI, M.**  
Final results of CEGRN observations campaigns (Poster)
- 16:03 **CAPORALI, A.**; **DE PERINI, V.**; **DELLA CORTE, V.**  
Tracking and data processing at the GPS station UPAD (Poster)
- 16:07 **FIGURSKI, M.**  
The effect of ionosphere modelling on the accuracy of GPS single-frequency observations (Poster)
- 16:11 **BOGUSZ, J.**; **FIGURSKI, M.**  
Influence of the geophysical effects on the results of GPS data processing (Poster)
- 16:15 **KRUCZYK, M.**  
Irregular changes in Earth rotation parameters (Poster)
- 16:19 **CZARNECKA, K.**; **CZARNECKI, K.**  
Are terrestrial levelling and satellite GPS networks well-matched with the recent dynamics of the Polish territory (Poster)
- 16:23 **DOUSA, J.**  
Long-period solutions of results of the GOP EUREF local analysis center (Poster)
- 16:27 **PACHUTA, A.**; **BARLIK, M.**; **KALINOWSKA-SLEDZINSKA, B.**; **MARGANSKI, S.**; **WALO, J.**  
Including of the vertical gravity gradient influence to gravimetric determinations in the Polish fundamental gravity network \* (Poster)
- 16:31 **GRENERCZY, GY.**  
Crustal deformations in the Pannonian basin inferred from GPS measurements (Poster)
- 16:35 **DEMEDIYUK, M.**; **DUBIS, L.**; **TRETYAK, K.**  
Geodynamic investigations in the area of Riksk fault (the Ukrainian Carpathians) (Poster)
- 16:39 **BONDARENKO, V.**; **SIDORENKO, G.**; **SHURUBKIN, V.**; **SVITLOV, S.**; **LOKSHYN, YU.**  
Status of absolute gravity measurements in Ukraine (Poster)
- 16:43 **GRENERCZY, GY.**; **KENYERES, A.**  
An attempt for geokinematic interpretation of GPS measurements in the CEGRN network (Poster)
- 16:47 **KUZNETSOVA, V.**; **MAKSYMCHUK, V.**; **OSTROVSKYJ, A.**; **TRETYAK, K.**; **VERTYTSKYJ, O.**; **ZABLOTSKYJ, F.**; **CHERNYAGA, P.**  
Achievements and prospects of geodynamic studies on the Carpathan test field (Poster)
- 16:51 **BENDYNA, M.**; **SLEDZINSKI, J.**; **TRETYAK, K.**; **ZABLOTSKYJ, F.**  
Progress in establishment of the Ukrainian-Polish observatory PIP-IVAN in Charnohora (Poster)

- 16:55 **ZABEK, Z.**  
Long-period absolute changes of gravity at the astrogeodetic observatory at Jozefoslaw \* (Poster)
- 16:59 **END OF SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

## **G16 Geodetic and geodynamic achievements of the CEI (Central European Initiative) - Poster Session**

Convener: Sledzinski, J.  
Co-Convener(s): Kostelecky, J.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - G  
Chairperson: Simek, J.

- G028 **DOLGOPOLOW, A.**; **WOLSKI, A.**  
Application DGPS system for surveys of hydrotechnical objects
- G029 **FELSKI, A.**; **SPECHT, C.**  
DGPS on the Baltic Sea - the hydrographic experience
- G030 **SZYMONSKI, M.**  
Some notes on the future navigation satellite system architecture for marine purposes
- G031 **CZARNECKI, K.**; **FELLNER, A.**; **JAFERNIK, H.**; **OLSZEWSKI, R.**; **ROGOWSKI, J.**; **SLEDZINSKI, J.**  
RTK-DGPS for military and civil aviation in Poland
- G032 **BOGUSZ, J.**; **KUJAWA, L.**; **KURKA, W.**; **PIRASZEWSKI, M.**; **ROGOWSKI, J.B.**; **DOBROWOLSKI, A.**; **LESZCZYNSKI, W.**; **SZOLUCHA, M.**  
Application of GPS technology to the environmental studies
- G033 **KUJAWA, L.**  
Comparison of different types of GPS receivers and antennas
- G034 **SLEDZINSKI, J.**  
Six GPS campaigns of the project EXTENDED SAGET
- G035 **SLEDZINSKI, J.**; **VYSKOCIL, P.**  
Monographs on geodynamics of a part of CEI territory
- G036 **KALINOWSKA-SLEDZINSKA, B.**; **BARLIK, M.**; **CZARNECKI, K.**; **MARGANSKI, S.**; **PACHUTA, A.**; **WALO, J.**  
Use of GPS measurements for determination of gravimetric topographic correction
- G037 **BOGUSZ, J.**  
Instrumental phase lag determination in Polish tidal stations
- G038 **BARLIK, M.**  
Incorporation of the vertical gravity gradient observations to the determination of separation between geoid and quasigeoid on Poland territory
- G039 **FERRARO, L.**; **MARJANOVIC, M.**; **MERVART, L.**; **BECKER, M.**; **RUS, T.**; **PANY, T.**; **STANGL, G.**; **KENYERES, A.**; **HEFTY, J.**; **ROGOWSKI, J.B.**; **FIGURSKI, M.**  
Final results of CEGRN observations campaigns



- G040 CAPORALI, A.; DE PERINI, V.; DELLA CORTE, V.  
Tracking and data processing at the GPS station UPAD
- G041 FIGURSKI, M.  
The effect of ionosphere modelling on the accuracy of GPS single-frequency observations
- G042 BOGUSZ, J.; FIGURSKI, M.  
Influence of the geophysical effects on the results of GPS data processing
- G043 KRUCZYK, M.  
Irregular changes in Earth rotation parameters
- G044 CZARNECKA, K.; CZARNECKI, K.  
Are terrestrial levelling and satellite GPS networks well-matched with the recent dynamics of the Polish territory
- G045 DOUSA, J.  
Long-period solutions of results of the GOP EUREF local analysis center
- G046 PACHUTA, A.; BARLIK, M.; KALINOWSKA-SLEDZINSKA, B.; MARGANSKI, S.; WALO, J.  
Including of the vertical gravity gradient influence to gravimetric determinations in the Polish fundamental gravity network \*
- G046A GRENERCZY, GY.  
Crustal deformations in the Pannonian basin inferred from GPS measurements
- G046B DEMEDYUK, M.; DUBIS, L.; TRETYAK, K.  
Geodynamic investigations in the area of Riksk fault (the Ukrainian Carpathians)
- G046C BONDARENKO, V.; SIDORENKO, G.; SHURUBKIN, V.; SVITLOV, S.; LOKSHYN, YU.  
Status of absolute gravity measurements in Ukraine
- G046D GRENERCZY, GY.; KENYERES, A.  
An attempt for geokinematic interpretation of GPS measurements in the CEGRN network
- G046E KUZNETSOVA, V.; MAKSYMCHUK, V.; OSTROVSKYJ, A.; TRETYAK, K.; VERTYTSKYJ, O.; ZABLOTSKYJ, F.; CHERNYAGA, P.  
Achievements and prospects of geodynamic studies on the Carpathian test field
- G046F BENDYNA, M.; SLEDZINSKI, J.; TRETYAK, K.; ZABLOTSKYJ, F.  
Progress in establishment of the Ukrainian-Polish observatory PIP-IVAN in Charnohora
- G046G ZABEK, Z.  
Long-period absolute changes of gravity at the astrogeodetic observatory at Jozefoslaw \*

## European Geophysical Society

*Inviting the scientists of the world to participate in the*

### Millennium Conference on Earth, Planetary & Solar Systems Sciences

**- 25th General Assembly -**

Fortezza da Basso, Florence, Italy  
3-7 April 2000

Join this unique celebration of the past and the new millennium in the capital of Renaissance and in the beauty of Tuscany.

Suggestions regarding the scientific programme and any inquiries should be addressed to:

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
EGS@COPERNICUS.ORG  
<http://www.copernicus.org/EGS/EGS.html>

# Hydrological Sciences

## HSA1 Hydrology and the Earth's crust 1 Characterization and modelling of the 2-D and 3-D structure of porous and fractured formations

Convener: Huggenberger, P.  
Co-Convener(s): Mackay, R.  
**Wednesday, 22 April 1998**  
Lecture Room: GALLIENI 3  
Chairperson: Jackson, P.C.

### Fractured rock

- 08:40 **DE DREUZY, J.R.**; DAVY, P.; BOUR, O.  
Transport properties of fault networks. Insight from  
a power law length distribution model
- 09:00 KAUFMANN, G.  
Numerical models of karst drainage systems
- 09:20 GUDMUNDSSON, A.  
Development of permeability in fault zones
- 09:40 KENNEDY, K.; MÜLLER, I.; OYONO, E.  
Surface geophysics applied to permeability  
determination, characterization and site model  
development
- 10:00 **MCDERMOTT, C.**; SAUTER, M.; LEIDL, R.;  
TEUTSCH, G.  
Using the aquifer analogue principle for the investi-  
gation of the fractured porous system: new tech-  
niques and modelling considerations
- 10:20 GUMIEL, P.; CAMPOS, R.; DURAN, J.J.  
Geometric modelling of fracture systems: application  
to different geological targets
- 10:40 GONZALEZ-GARCIA, R.; CUVIER, S.;  
HARLAUT, D.; LEDESERT, B.; THOVERT, J.-F.;  
ADLER, P.M.  
Three-dimensional characterization of a real fracture  
network: reconstruction, geometry, transports
- 11:00 **KLINGBEIL, R.**; TEUTSCH, G.; KLEINEIDAM,  
S.; WHITTAKER, J.; AIGNER, T.  
Characterisation and modelling of quaternary outcrop  
analogues
- 11:20 LUNCH
- 12:00 Business Meetings

Chairperson: N.N.

### Porous Media

- 14:00 **TIMMERMAN, A.**; VANDERSTEEN, K.;  
MARCHAL, G.; FUCHS, T.; FEYEN, J.  
Using precorrected raw data in computer tomography  
to quantify structures in dense porous media
- 14:20 **HASSANI, R.**; BERNARD, D.; GOUZE, P.  
A simplified numerical model coupling fluid flow,  
heat and mass transfers and geochemical reactions in  
sedimentary basins
- 14:40 **LUNN, R.J.**; MACKAY, R.  
Characterising zones of locally enhanced conductivi-  
ty from pump test data
- 15:00 **MORAKINYOL, D.**; MACKAY, R.  
Characterizing the geological patterns in an alluvial  
formation beneath an industrial redevelopment site

- 15:20 **TELES, V.**; PERRIER, E.; DE MARSILY, G.  
A new approach to sediment erosion and deposition  
in an alluvial system
- 15:40 **BRUDERER, C.**; BERNABE, Y.  
Effect of the variance of the pore size distribution on  
hydrodynamic dispersion in heterogeneous networks
- 16:00 **MONTEMAGNO, C.D.**  
Experimental measurement of the functional relation-  
ship between capillary pressure, saturation and  
interfacial area
- 16:20 **WHITTAKER, J.**; TEUTSCH, G.; GRATHWOHL,  
P.; SUDICKY, E.  
Numerical simulation of the flow and transport of  
NAPLs in heterogeneous porous media
- 16:40 **BETHERS, U.**; JEKABSONS, N.; SENNIKOV, J.  
An approach for representation of 3D geological  
structures and modelling groundwater flows
- 17:00 END OF SUB-SESSION

## HSA1 Hydrology and the Earth's crust 1 Characterization and modelling of the 2-D and 3-D structure of porous and fractured formations - Poster Session

Convener: Huggenberger, P.  
Co-Convener(s): Mackay, R.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Wednesday, 17:30 - 19:00**  
Poster Area: AGORA 2 - HS

- HS001 **YANG, J.**; EDWARDS, J.N.  
A finite element algorithm for simulating ground-  
water flow, heat and contaminant transport in  
discretely fractured rocks
- HS002 **OFTERDINGER, U.**; RENARD, P.  
Determining a suitable fracture network model as  
a basis for groundwater-modelling in a fractured  
crystalline aquifer
- HS003 **BLOOMFIELD, J.P.**; BARKER, J.A.  
Modelling fracture aperture growth using simple  
growth laws
- HS004 **DEGNAN, P.J.**; MILODOWSKI, A.E.;  
TODMAN, S.  
The identification of potential flowing features  
for a conceptual model of fracture flow at  
Sellafield
- HS005 **MENDIONDO, E.M.**; GOLDENFUM, J.A.  
Unsaturated media study in soils with  
macropores through pseudo-saturation approach:  
an application in basaltic Terra Roxa Estruturada  
soil, southern Brazil
- HS006 **JACKSON, C.P.**; WATSON, S.P.  
Upscaling and calibration in the NIREX 97  
assessment of the performance of a repository at  
Sellafield
- HS007 **TIMMERMAN, A.**; MALLANTS, D.; FEYEN,  
J.  
Describing and characterizing macroporosity in a  
loam soil using dyes to predict saturated hydrau-  
lic conductivity

HS

- HS008 WIPFLER, E.L.; SANCHEZ-VILA, X.;  
CARRERA-RAMIREZ, J.  
MC simulation of transport in 2-D heterogenous  
anisotropic media with the flow orientated in an  
angle
- HS009 REGLI, CH.; HUGGENBERGER, P.;  
ROHRMEIER, M.; EINSTEIN, H.; RAUBER,  
M.  
Integration of field-data of different quality into  
flow and transport models: case studies from  
river Wiese and river Toess, Switzerland
- HS011 COUSIN, I.; BRUAND, A.; RENAULT, P.;  
LEVITZ, P.  
Gas diffusion in an undisturbed soil core and in  
its 3D reconstruction
- HS013 MORAKINYO, J.A.; MACKAY, R.  
Alternative geostatistical models of contaminated  
soil stratigraphy

## **HSA1 Hydrology and the Earth's crust .2 Identification of model parameters in groundwater hydrology**

Convener: Giudici, M.  
Co-Convener(s): de Marsily, G.  
**Monday, 20 April 1998**  
Lecture Room: GALLIENI 3  
Chairperson: Mackay, R.

- 09:00 GOMEZ-HERNANDEZ, J.J.  
Upscaling and downscaling: travelling up and down  
the scales ladder (Solicited Paper)
- 09:30 FENWICK, D.; LENORMAND, R.  
Calculation of homogenized parameters for upscaling  
tracer flow through heterogeneous media
- 09:45 AVKHADIEV, F.G.; KACIMOV, A.R.  
What is wrong in the Kozeny-Carman approach?
- 10:00 GIUDICI, M.; ORTUANI, B.; PARRAVICINI, G.;  
PONZINI, G.  
Identification of flow model parameters and scale  
changes with the differential system method
- 10:15 CUYPERS, M.; DE FOUQUET, C.  
Geostatistical simulation of an aquifer, conditioned by  
head and transmissivity measurements
- 10:30 BREAK

Chairperson: Lenormand, R.

- 11:00 TODINI, E.  
Extending to finite element schemes the Kalman  
filter based inverse problem solution
- 11:15 CHRISTENSEN, S.; COOLEY, R.L.  
Evaluation of prediction intervals for expressing  
uncertainties in groundwater flow model predictions
- 11:30 BUTERA, I.; TANDA, M.G.  
Reliability of transmissivity mean and variance  
estimation by processing a limited set of data
- 11:45 CARRERA, J.; MEIER, P.; MEDINA, A.  
On the geostatistical inversion of interference tests  
(Solicited Paper)
- 12:15 NOETINGER, B.; GAUTIER, Y.  
Determination of geostatistical parameters using  
pumping tests data
- 12:30 LEBBE, L.; GAUS, I.; VAN MEIR, N.  
Use of well logs in an inverse numerical model  
during the interpretation of a double-pumping test

- 12:45 SCHAFMEISTER, M.-T.  
Indicator kriging and indicator simulation: tools to  
integrate soft information into the parameter identifi-  
cation procedure in groundwater modelling

13:00 LUNCH

Chairperson: Schafmeister, M.T.

- 14:00 KITTEROD, N.-O.; LANGSHOLT, E.;  
GOTTSCHALK, L.  
A hermeneutic approach for simulation of unsaturat-  
ed flow in a heterogeneous formation
- 14:15 CAPILLA, J.E.; GOMEZ-HERNANDEZ, J.J.;  
RODRIGO, J.; SAHUQUILLO, A.  
Stochastic inversion integrating exhaustive geophys-  
ical data in a non-Gaussian framework
- 14:30 KROM, T.D.; ROSBJERG, D.  
Multivariant multifacies geostatistical simulation for  
hydraulic conductivity
- 14:45 TACHER, L.; TURBERG, P.  
Influence of geophysically detected heterogeneities  
in alluvial deposits on regional scale groundwater  
models
- 15:00 LAMB, R.; BEVEN, K.; MYRABO, S.  
Using distributed water table measurements to  
constrain model parameter and simulation uncertain-  
ty

Chairperson: Rosbjerg, D.

- 15:15 ADAR, E.M.  
Assessment of transmissivities in arid alluvial basin  
by a mixing cell model applied to spatial hydro-  
chemical and isotopic distribution in groundwater
- 15:30 PINAULT, J.-L.; PAUVELS, H.  
An inverse method for modelling mechanisms  
affecting groundwater quality
- 15:45 BATH, A.H.; DEGNAN, P.J.; JACKSON, C.P.  
Heads and densities for calibrating a model of a low  
permeability groundwater system
- 16:00 TOTSCHKE, K.U.; IGLER, B.; KNABNER, P.  
Unbiased identification of nonlinear sorption char-  
acteristics by soil column outflow experiments
- 16:15 ZECHNER, E.; SAIERS, J.E.; GENEUREUX, D.  
Using water and tracer flux information at canal  
boundaries to improve aquifer parameter estimation:  
Biscayne Aquifer, Florida
- 16:30 END OF SUB-SESSION
- 17:00 Opening
- 19:30 Reception

---

**Free Subscription**

**to**

**HESS**

**for ON-SITE registrants**

---

## HSA1 Hydrology and the Earth's crust .2 Identification of model parameters in groundwater hydrology - Poster Session

Convener: Giudici, M.

Co-Convener(s): de Marsily, G.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: AGORA 2 - HS

- HS014 **LUNATI, I.; BERNARD, D.; GIUDICI, M.; PONZINI, G.; PARRAVICINI, G.**  
Inverse problem and upscaling: comparison between the DS method and a classical statistical one
- HS015 **KONTIO, K.; NIEMI, A.; KUUSELA-LAHTINEN, A.**  
Calibration and upscaling of hydraulic characteristics of 3D fracture networks in crystalline rock
- HS016 **TODINI, E.**  
Influence of parameter estimation in Kriging: an example of application
- HS017 **SMIDTS, O.F.; DEVOOGHT, J.; MEYUS, Y.; WEMAERE, I.; MARIVOET, J.**  
Sensitivity analysis and inverse problem for the sub-regional flow model of the neogene aquifer
- HS018 **ORTUANI, B.; SAVI, F.; GIUDICI, M.**  
Identification of flow parameters for a regional multilayered aquifer with the differential system method
- HS019 **TYCHON, B.; DE BACKER, L.W.; VANDER BORGHT, P.**  
Water electrical conductivity-waterflow as a low cost mean to define stormflow components and basin initial soil water content
- HS020 **OVCHINNIKOV, M.N.; KUSHTANOVA, G.G.**  
A filtrational model parameters and interpretation of hydrodynamic, acoustic and thermal measurements data
- HS021 **BASTET, G.; BRNAND, A.; VOLTZ, M.; QUETIN, P.; BORNAND, M.**  
Prediction of the water retention properties of soils: performance of available pedotransfer functions and development of news approaches
- HS022 **SCHINDLER, U.; STEIDL, J.; EULENSTEIN, F.; MUELLER, L.**  
Estimating and testing of soil hydrologic properties for the simulation of the water balance in a Pleistocene catchment by soil hydrological field measurements
- HS023 **COUDRAIN-RIBSTEIN, A.; GOUZE, P.; DE MARSILY, G.**  
Temperature - carbon dioxide partial pressure trends in confined aquifers
- HS024 **SIMON, W.; FESCH, C.; REICHERT, P.; HADERLEIN, S.; SCHWARZENBACH, R.**  
Continuous model: an extension of the classic two-region model
- HS025 **BATRAK, G.I.**  
The model of water exchange between cascade of radioactive water reservoirs of Tcha River (south Ural) and groundwater, as the tool of verification of balance constructions

- HS026 **KENNEDY, K.; MÜLLER, I.; SCHÜRCH, M.**  
Documented contaminant transport rates - their use to reduce uncertainty and improve model prediction
- HS027 **CHRISTIANSEN BARLEBO, H.; HILL, M.C.; ROSBJERG, D.**  
Identification of zones and groundwater parameters at a heterogeneous aquifer, using a 3D inverse flow and transport model
- HS028 **GOUZE, PH.; MACKAY, R.; MUTEN, T.**  
Understanding the dual-permeability behaviour of fractured chalk using the example of atrazine contamination at a pumping station
- HS029 **GRANLUND, K.; REKOLAINEN, S.**  
Estimation of agricultural nitrate load to aquifers by one-dimensional transport model
- HSA29A **PURVANCE, D.T.; ANDRICEVIC, R.**  
Goelectric measurements of hydraulic heterogeneity near a borehole: theory and field example \*

## HSA1 Hydrology and the Earth's Crust .3 Reactive mass transport: experi- mental studies of chemical, colloidal and biological processes

Convener: Gouze, P.

Co-Convener(s): Schäfer, G.

Tuesday, 21 April 1998

Lecture Room: GALLIENI 3

Chairperson: N.N.

- 11:00 **DÖRING, U.; JAEKEL, U.; VEREECKEN, H.**  
Impact of sorption heterogeneity on reactive solute transport
- 11:15 **VEREECKEN, H.; JAEKEL, U.**  
Determination of sorption parameter from breakthrough curves using asymptotic analysis
- 11:30 **MAYER, M.; IRMLER, S.; DAHMKE, A.**  
Development of a reactive tracer for iron oxid/hydroxid quantification in sediments
- 11:45 **LORD, L.D.; DEMOND, A.H.; HAYES, K.F.**  
The impact of speciation, paritioning and sorption on the migration of multiple fluid phases in the subsurface
- 12:00 **TISCHNER, T.; NÜTZMANN, G.**  
Phosphorus leaching from sandy soils in dependance on hydrological conditions
- 12:15 **GUIMERA, J.; DURO, L.; JORDANA, S.; BRUNO, J.; WIKBERG, P.**  
Redox front advance in low permeability media during interglacial periods
- 12:30 **LUNCH**
- Chairperson: Vereecken, H.
- 14:00 **GRESWELL, R.; LLOYD, J.W.; TELLAM, J.H.; PARKER, D.**  
The study of solute movement through rock using Positron Emission Tomography
- 14:15 **RENARD, F.; GRATIER, J.-P.**  
Evidence for self-organization during reactive fluid flow in a porous medium

HS

- 14:30 HOLM, J.; ENGESGAARD, P.; JENSEN, K.H.; HENZE, M.; ALBRECHTSEN, H.J.  
Effects of biomass growth on the hydraulic properties of groundwater aquifers
- 14:45 BETTAHAR, M.; BAVIERE, M.; DUCREUX, J.; MUNTZER, P.; SCHÄFER, G.  
Surfactant flow behaviour in porous medium
- 15:00 KENNEDY, K.; MOSE, R.; ROSSI, P.; MÜLLER, I.  
Comparative behavior of biocolloid and chemical mass transport in heterogeneous porous media
- 15:15 BAUMANN, T.; NIESSNER, R.  
Colloidal mass transfer of metal ions within porous media
- 15:30 GUERIN, V.A.E.; BUES, M.A.  
Reactive mass transport with biodegradation: batch and column tests
- 15:45 MARTINS, J.M.; MERMOUD, A.  
Behaviour of dinitrophenol herbicides in alluvial soil batches, columns and lysimeter
- 16:00 END OF SUB-SESSION

### **HSA1 Hydrology and the Earth's crust .3 Reactive mass transport: experimental studies of chemical, colloidal and biological processes - Poster Session**

Convener: Gouze, P.  
Co-Convener(s): Schäfer, G.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS

- HS030 MAZUKINA, S.I.; MALINOVSKY, D.N.  
Physico-chemical modelling of water-solid interactions in tailings of Nepheline concentrate
- HS031 COTRIM, S.; GOLDENFUM, J.A.  
Experimental determination of physical parameters for the simulation of leachate flux and the transport of non-conservative, organic pollutants
- HS032 LENK, M.; SAENGER, N.; FISCHER, J.  
The flow through river bed sediment and its consequence on transport and concentrations

### **HSA1 Hydrology and the Earth's crust .4 Coastal aquifer dynamics and groundwater recharge**

Convener: Candela, L.  
Co-Convener(s): Munoz-Carpena, R.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS  
Chairperson: Morell, I.  
Editors: Candela, L.; Munoz-Carpena, R.

- HS034 MORELL, I.; TUNON, J.; JIMENEZ, J.R.  
Chemical evidence of surface water infiltration in the Castellon plain aquifer, Spain
- HS035 MORELL, I.; GIMENEZ, E.; TULIPANO, L.; FIDELIBUS, M.D.  
Seawater intrusion and saline regional waters. A synergic salinization

- HS036 BELLOT, J.; HERNANDEZ, N.; CHIRINO, E.  
Effect of different vegetation type cover on the unsaturated flow profiles and water balances in semi-arid areas of Spain
- HS037 EL AMRANI-PAAZA, N.; GARCIA-LOPEZ, S.; BENAVENTE, J.; CRUZ-SANJULIAN, J.J.  
Modifications in a coastal aquifer induced by changes in water management upstream (Adra river delta, SE Spain)
- HS038 GARCIA-ARSTEGUI, J.L.; PADILLA, F.; HIDALGO, M.C.; CRUZ-SANJULIN, J.J.  
Water management in a southern coastal region of Spain (the Valez river). Simulation of groundwater and surface water flow for the proper freshwater budget

### **HSA1 Hydrology and the Earth's crust .4 Coastal aquifer dynamics and groundwater recharge**

Convener: Candela, L.  
Co-Convener(s): Munoz-Carpena, R.  
**Thursday, 23 April 1998**  
Lecture Room: GALLIENI 3  
Chairperson: Usunoff, E.  
Editors: Candela, L., Munoz-Carpena, R.

- 09:00 CUSTODIO, E.  
Current issues in coastal aquifer dynamics and groundwater recharge (Solicited Paper)
- 09:30 CONDESSO MELO, M.T.; EDMUNDS, W.M.; MARQUES DA SILVA, M.A.  
Hydrogeochemistry and flow modelling of the Aveiro multilayer cretaceous aquifer
- 09:50 MAS-PLA, J.; BACH, J.; VIQALS, E.; TRILLA, J.; ESTALRICH, J.  
Assessing groundwater exploitation in the Alt Empordor coastal aquifer
- 10:10 KOOL, H.; GROEN, J.; DE VRIES, J.J.  
Problems associated with modelling sea water intrusion at large space and time scales
- 10:30 BREAK

Chairperson: Custodio, E.  
Editors: Candela, L., Munoz-Carpena, R.

- 11:00 ABU-ZEID, N.; SANTARATO, G.; GIOVANNINI, A.  
Investigation of aquifer boundaries and seawater intrusion in the coastal plain of the Po delta using geoelectric measurements
- 11:20 GUIMERA, J.; CANDELA, L.  
Comparison of different tracer methods to assess natural recharge in coastal aquifers
- 11:40 VARNI, M.; USUNOFF, E.; WEINZETTEL, P.; RIVAS, R.  
The groundwater recharge in the Azul aquifer, central Buenos Aires province, Argentina
- 12:00 MORELL, I.; TUNON, J.; JIMENEZ, J.R.  
Chemical evidence of surface water infiltration in the Castellon plain aquifer, Spain
- 12:05 MORELL, I.; GIMENEZ, E.; TULIPANO, L.; FIDELIBUS, M.D.  
Seawater intrusion and saline regional waters. A synergic salinization

- 12:10 BELLOT, J.; HERNANDEZ, N.; CHIRINO, E.  
HSA1.4- Effect of different vegetation type cover on the  
010 unsaturated flow profiles and water balances in  
semi-arid areas of Spain
- 12:15 EL AMRANI-PAAZA, N.; GARCIA-LOPEZ, S.;  
HSA1.4- BENAVENTE, J.; CRUZ-SANJULIAN, J.J.  
011 Modifications in a coastal aquifer induced by changes in water management upstream (Adra river delta, SE Spain)
- 12:20 GARCIA-ARSTEGUI, J.L.; PADILLA, F.;  
HSA1.4- HIDALGO, M.C.; CRUZ-SANJULIN, J.J.  
012 Water management in a southern coastal region of Spain (the Valez river). Simulation of groundwater and surface water flow for the proper freshwater budget
- 12:25 END OF SUB-SESSION

## **HSA2 Hydrology and landforms and fluvial systems**

### **.1 Measurement of bedload and suspended sediment in turbulent flow**

Convener: Laronne, J.B.  
Co-Convener(s): Ergenzinger, P.  
**Monday, 20 April 1998**  
Lecture Room: MYKONOS  
Chairperson: Ergenzinger, P.

- 14:00 RUBIN, D.M.; NELSON, J.M.; SHREVE, R.L.  
Predicting bedload flux under waves
- 14:15 HABERSACK, H.; NACHTNEBEL, H.P.;  
LARONNE, J.B.  
Effects of the 3-D turbulent flow field on trap measurements
- 14:30 DITTRICH, A.  
Velocity field and resistance of flow over rough surfaces
- 14:45 KOZLOWSKI, B.  
Influence of ring structures and shear stress distribution on river bed stability
- 15:00 BATALLA, R.J.; ROVIRA, A.  
Bedload pulses associated with migration of sand dunes
- 15:15 LARONNE, J.; GARCIA, C.  
Bursts and cyclical movement of sand/granules on mobile bed patches utilising video photography - the Tordera river
- 15:30 DISSE, M.; BARDOSSY, A.  
Quantitative evaluation of bed load measurements in the river Rhine
- 15:45 COHEN, H.; LARONNE, J.B.  
Continuous monitoring of bedload discharge in an extreme arid environment, Nahal Rahaf and Kanaim, Dead Sea, Israel
- 16:00 LIEBAULT, F.; CLEMENT, P.  
Assessment of mountain stream annual bedload transport rates in the Drome watershed, France
- 16:15 PFEIFFER, A.; THIELE, M.; BROCKMANN, U.;  
PROCHNOW, D.  
A tool for sizing flocs and particles in suspension: laser scattering combined with image analysis of video frames \*
- 16:30 Concluding Remarks
- 16:45 END OF SESSION
- 17:00 Opening
- 19:30 Reception

## **HSA2 Hydrology and landforms and fluvial systems**

### **.2 Morphological processes at the hillslope and river scale**

Convener: Roth, G.  
Co-Convener(s): Copertino, V.  
**Monday, 20 April 1998**  
Lecture Room: MYKONOS  
Chairperson: Greco, M.

- 08:45 PELLETIER, J.D.  
The transition from rilled to branched drainage in a hillslope evolution model
- 09:00 HELMING, K.; RÖMKENS, M.J.M.; PRASAD, S.N.; SOMMER, H.  
Experimental investigation of drainage network development
- 09:15 DARBOUX, F.; DAVY, P.; GASCUEL-ODOUX, C.; HUANG, C.  
Soil surface morphology effects on overland flow triggering
- 09:30 DYKES, A.P.  
Hydrological controls on the maintenance of steep tropical slopes by mass movement
- 09:45 JONES, J.A.A.; CONNELLY, L.J.  
A semi-distributed simulation model for natural pipeflow
- 10:00 LA BARBERA, P.; LANZA, L.  
The morphological structure of multi-catchment regions
- 10:15 BOGAART, P.W.  
Climate change and fluvial dynamics: a multimodel approach
- 10:30 END OF SUB-SESSION
- 17:00 Opening
- 19:30 Reception

## **HSA2 Hydrology and landforms and fluvial systems**

### **.2 Morphological processes at the hillslope and river scale**

Convener: Roth, G.  
Co-Convener(s): Copertino, V.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS  
Chairperson: Greco, M.

- HS039 AGNESE, C.; CRIMINISI, A.  
On the distribution functions of the peak and the time to peak of topological width function
- HS040 LA BARBERA, P.; LANZA, L.  
On the hydrological response of multi-catchment systems to large scale meteorological events

### **Attend the Business Meeting of your Section**

on Wednesday, 22 April, 12.00-14.00, Lecture Room Gallieni 3

HS

## **HSA2 Hydrology and landforms and fluvial systems**

### **.3 Sediment and contaminant transfers at the land/ocean interface**

Convener: Leeks, G.  
Co-Convener(s): Monaco, A.  
**Monday, 20 April 1998**  
Lecture Room: MYKONOS  
Chairperson: N.N.

- 11:00 **SKOULIKIDIS, N.TH.; ZACHARIAS, I.**  
Causes and effects of recent hydrological changes in Greece
- 11:20 **MITINA, N.N.**  
The dynamics of main factors of genesis in river mouth regions under different anthropogenic load
- 11:40 **BETHERS, U.; SENNIKOV, J.; GRZHIBOVSKIS, R.; EBERHARDS, G.**  
An investigation of prolonged coastline development by coupled longshore/crossshore model
- 12:00 **RIMMELIN, P.; DUMON, J.-C.**  
Transfer of dissolved inorganic nitrogen to a coastal lagoon: the case of the Arcachon Bay (France)
- 12:20 **VERLAAN, P.A.J.**  
Loads of heavy metals from the Scheldt estuary to the North Sea
- 12:40 **END OF SUB-SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

## **HSA3 Open session on hydrology and climate**

Convener: O'Kane, J.P.  
Co-Convener(s): Bonacci, O.; Pulido-Bosch, A.  
**Wednesday, 22 April 1998**  
Lecture Room: GALLIENI 2  
Chairperson: O'Kane, J.P.

- 09:00 **CORTE-REAL, J.; XU, H.; QIAN, B.**  
Downscaling GCM large-scale information to regional climate scenario: a weather generator based on daily circulation patterns
- 09:15 **XU, C.-Y.**  
From GCMs to river flow: a review of downscaling and hydrological modelling approaches
- 09:30 **DUCHARNE, A.; LAVAL, K.**  
Sensitivity of the global water cycle to soil water-holding capacity
- 09:45 **DE ROSNAY, P.; POLCHER, J.; BRUEN, M.**  
A new parameterization of soil hydrology in the LMG GCM
- 10:00 **BURLANDO, P.; GROSSI, G.; ROSSO, R.**  
Effects of potential climate change on hydrologic variability in the Arno basin
- 10:15 **SLOAN, W.T.; EWEN, J.; KILSBY, C.G.; O'CONNELL, P.E.**  
Application of the UP modelling system to the Arkansas Red River basin
- 10:30 **CRISCI, A.; GOZZINI, B.; MARACCHI, G.; PAGLIARA, S.; MENEGUZZO, F.**  
Extreme rainfalls in the changing climate: regional analysis and hydrological implications

- 10:45 **ROBERTS, G.; HUDSON, J.A.; CRANE, S.B.**  
The effects of possible future climate and land use change on streamflow from contrasting catchment areas in the UK and the available management options to ameliorate these effects
- 11:00 **VAN MIERLO, J.M.C.; BARDOSSY, A.**  
Precipitation forecasting for different time scales
- 11:15 **GOLDBERG, V.**  
Effect of coupling between a vegetation canopy and the atmosphere on energy and water transfer - results with the model HIRVAC
- 11:30 **LUNCH**
- 12:00 **Business Meetings**

Chairperson: N.N.

- 14:00 **BATRAK, G.**  
Influence of climatic modifications on ground water and environment
- 14:15 **SANTOS, M.J.; GONCALVES HENRIQUES, A.**  
A method for drought monitoring
- 14:30 **KRASOVSKAIA, I.; GOTTSCHALK, L.; KUNDZEWICZ, Z.**  
Dimensionality of Scandinavian river flow regimes
- 14:45 **MOTOVILOV, YU.G.**  
Simulation of climate change impacts on river runoff: coupling historical and modelling approaches
- 15:00 **SHUMOVA, N.A.**  
Normal evapotranspiration in different land types: agricultural fields and river basins
- 15:15 **PILLING, C.; JONES, J.A.A.**  
Downscaling precipitation and potential evapotranspiration from GCM output to drive a hydrological simulation model at catchment scale
- 15:30 **END OF SESSION/Session HSA7 continues**

## **HSA3 Open session on hydrology and climate - Poster Session**

Convener: O'Kane, J.P.  
Co-Convener(s): Bonacci, O.; Pulido-Bosch, A.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS

- HS041 **CORTE-REAL, J.; BERNARDINO, M.C.**  
Validation of GCM precipitation output using the method of fragments
- HS042 **BUSSAY, A.; SZINELL, CS.; HAYES, M.; SVOBODA, M.**  
Monitoring drought in Hungary using the Standardized Precipitation Index
- HS043 **UVO BERTACCHI, C.**  
Modelling runoff in Amazonia using sea surface temperature
- HS044 **RANA, G.; MASTRORILLI, M.; KATERJI, N.**  
Reference evapotranspiration estimating for hydrological purposes

---

**Attend the Poster Session**

---

## HSA4 Open session on hydrology and weather

Convener: Burlando, P.

**Tuesday, 21 April 1998**

Lecture Room: GALLIENI 2

Chairperson: Burlando, P.

- 09:00 BURLANDO, P.  
Introduction
- 09:10 MENEGUZZO, F.; VICENTE, G.A.; PAGLIARA, S.; GOZZINI, B.; BOTTAI, L.; PIERI, M.  
Preliminary operational satellite rainfall estimates in the Mediterranean countries and hydrological consequences
- 09:30 SANCHEZ-DIEZMA, R.; ZAWADZKI, I.; SEMPERE TORRES, D.  
An improvement of weather radar estimation of rain classifying radar rainfall estimations into convective and stratiform
- 09:50 BORGA, M.; ANAGNOSTOU, E.N.  
Hydrologic assessment of real-time bias adjustment procedures in radar-rainfall estimation
- 10:10 HAIDEN, T.  
Verification of model-predicted mesoscale rainfall patterns in an alpine area
- 10:30 BREAK

Chairperson: Borga, M.

- 11:00 BEROUD, J.-M.  
Performance of the Swiss model: comparisons with observations at the hydrological station of Riet-holzbach
- 11:20 BRANDSMA, T.; BUIHAND, T.A.  
Rainfall generator for the Rhine basin: multi-site generation of weather variables by nearest-neighbour resampling
- 11:40 BARDOSSY, A.; GUENNI, L.  
Disaggregation of highly seasonal monthly rainfall by simulating annealing
- 12:00 UIJLENHOET, R.; CREUTIN, J.-D.  
A stochastic model of rainfall at the raindrop scale
- 12:20 MONTANARI, A.  
Storm structure variability in historical rainfall records observed in Italy
- 12:40 PEGRAM, G.; CLOTHIER, A.  
Space-time modelling of rainfall in fine intervals: the "string of beads" model (Oral + Video)
- 13:00 LUNCH

Chairperson: Pegram, G.

- 14:00 CELLE, H.  
Relation between the rainwater chemical and isotopic content and the meteorological parameters in the western Mediterranean region (Poster)
- 14:05 BONI, G.; GOLLO, P.; VERSACE, C.; SICCARDI, F.  
Combined use of remotely sensed data and ground observation for the estimation of soil moisture conditions (Poster)
- 14:10 LA BARBERA, P.; LANZA, L.G.; STAGI, L.; LOMBARDO, F.  
Influence of measuring errors due to uncalibrated raingauges on flood analysis and prediction (Poster)

- 14:15 SCHINDLER, H.  
Note on heavy precipitation (Poster)
- 14:20 PANAGOULIA, D.; DIMOU, G.  
Impact of global climate change on elevation zone precipitation statistics
- 14:40 ADLER, M.-J.; BUSUIOC, A.; COSOVANU, M.  
Characteristic of high water and droughty periods in the Carpathian region induced by variabilities in the large scale circulation
- 15:00 TRIGO, I.F.; DACAMARA, C.; CORTE-REAL, J.M.  
Non-linear statistical modelling of runoff using MARS
- 15:20 IACOBELLIS, V.; CLAPS, P.; FIORENTINO, M.  
Role of climatic index in geomorphoclimatic derivation of flood frequency
- 15:40 Discussion
- 16:30 END OF SESSION

Video presentation: Wednesday 17.00-19.00 in the Poster Area

## HSA4 Open session on hydrology and weather - Poster Session

Convener: Burlando, P.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Wednesday, 17:00 - 19:00**

Poster Area: AGORA 2 - HS

Chairperson: N.N.

- HS045 CELLE, H.  
Relation between the rainwater chemical and isotopic content and the meteorological parameters in the western Mediterranean region
- HS046 BONI, G.; GOLLO, P.; VERSACE, C.; SICCARDI, F.  
Combined use of remotely sensed data and ground observation for the estimation of soil moisture conditions
- HS047 LA BARBERA, P.; LANZA, L.G.; STAGI, L.; LOMBARDO, F.  
Influence of measuring errors due to uncalibrated raingauges on flood analysis and prediction
- HS049 SCHINDLER, H.  
Note on heavy precipitation

## HSA5 Open session on hydrology and surface hydrological processes

Convener: Kiely, G.

Co-Convener(s): Bormann, H.

**Monday, 20 April 1998**

Lecture Room: GALLIENI 2

Chairperson: Kiely, G.

Editor: Kiely, G.

- 08:30 MENGELKAMP, H.-T.; KIELY, G.; WARRACH, K.; RUHE, C.  
Simulation of runoff at plot and catchment scale (Solicited Paper)
- 09:00 SZINELL, CS.; ACS, F.  
Sensitivity of surface fluxes to structural differences in soil moisture simulation

HS



- 09:15 **ORLANDINI, S.**  
HSA5- A two-layer model of near-surface soil drying for  
003 time-continuous hydrologic simulations  
09:30 **OLIOSO, A.; CHAUKI, H.; BERTUZZI, P.**  
HSA5- Estimation of energy fluxes from thermal infrared,  
004 spectral reflectance, microwave data and SVAT  
modelling  
09:45 **DEKKER, S.C.; BOUTEN, W.**  
HSA5- Modelling forest transpiration from different perspec-  
005 tives  
10:00 **FRÜHAUF, C.; ZIMMERMANN, L.;**  
HSA5- **BERNHOFER, CH.**  
006 Comparison of forest evapotranspiration from ECEB  
measurements over a forest spruce stand with the  
water budget of a catchment  
10:15 **ZIMMERMANN, L.; FRUEHAUF, C.; SURKE,**  
HSA5- **M.; BERNHOFER, CH.**  
007 The role of interception in the water budget of  
spruce stands in the Eastern Ore Mountains/Germany  
10:30 **BREAK**

Chairperson: Mengelkamp, H.-T.  
Editor: Kiely, G.

- 11:00 **SAXENA, R.K.; JAEDICKE, C.; LUNDIN, L.-C.**  
HSA5- Comparison of lake evaporation estimated by isotope  
008 mass-balance, bulk-aerodynamic & Bowen ratio  
methods  
11:15 **WIGNERON, J.-P.; CALVET, J.-C.; CHANZY, A.**  
HSA5- Estimating the root-zone soil moisture from remote  
009 sensing observations  
11:30 **MOTOVILOV, YU.G.; GOTTSCHALK, L.;**  
HSA5- **ENGELAND, K.**  
010 Modelling of hydrological cycle components in the  
NOPEX area  
11:45 **DIERMANSE, F.**  
HSA5- Representation of natural heterogeneity in  
011 rainfall-runoff models  
12:00 **NIRUPAMA; TAKASAO, T.; SHIIBA, M.;**  
HSA5- **TACHIKAWA, Y.**  
012 A generalised expression for soil moisture storage  
capacity distribution  
12:15 **BORMANN, H.; DIEKKRÜGER, B.;**  
HSA5- **RENSCHLER, C.**  
013 Regionalization concepts for hydrological modelling  
on different scales using a physically based model:  
results and evaluation  
12:30 **YOUNG, M.D.B.**  
HSA5- Assessment and development of pedotransfer func-  
014 tions for semi-arid sub-Saharan Africa  
12:45 **MENZIANI, M.; PUGNAGHI, S.; PILAN, L.;**  
HSA5- **SANTANGELO, R.; VINCENZI, S.**  
015 Field experiments to study evaporation from a  
saturated bare soil  
13:00 **LUNCH**

Chairperson: Bormann, H.  
Editor: Kiely, G.

- 14:00 **MOEHRLENS, C.; KIELY, G.; PAHLOW, M.**  
HSA5- Evaporation from a humid grassland catchment  
016  
14:15 **SEUNTJENS, P.; CORNELIS, C.; DE BRUCKER,**  
HSA5- **N.; GEUZENS, P.**  
017 Derivation of functional layers in a podzol  
toposequence for simulating cadmium transport

- 14:30 **WENG, PH.; COUDRAIN-RIBSTEIN, A.;**  
HSA5- **BENDJOURDI, H.**  
018 Hydrologic measurements in an alluvial wetland  
14:45 **PERUMAL, M.; RANGA RAJU, K.G.;**  
HSA5- **O'CONNELL, P.E.**  
019 Field applications of a variable parameter muskingum  
method  
15:00 **GREGORIS, Y.; SCHOBER, A.**  
HSA5- Genetic algorithms, neural networks: is it possible to  
020 use these "modern concepts" for hydrologic models?  
15:15 **TOTH, E.; MONTANARI, A.; BRATH, A.**  
HSA5- Real-time flood forecasting via combined use of  
021 conceptual and stochastic models  
15:30 **BENAVENTE, J.; ALMECIIA, C.; CARRASCO,**  
HSA5- **F.**  
022 Response to extreme hydrological situations in the  
storage of an anthropogenically affected salt lake  
15:45 **KOOL, H.; DE VRIES, J.J.**  
HSA5- Land subsidence and hydrodynamic compaction of  
023 sedimentary basins  
16:00 **DUCHARNE, A.; KOSTER, R.D.; SUAREZ, M.J.;**  
HSA5- **KUMAR, P.**  
024 Evaluation of a catchment-based land surface model  
for GCMS  
16:15 **SCHULZ, J.-P.; DÜMENIL, L.; POLCHER, J.**  
HSA5- Impact of different numerical coupling techniques  
025 between surface and atmosphere in a GCM  
16:30 **KLEIDON, A.; HAGEMANN, S.**  
HSA5- Influence of rooting depth on the simulated climate  
026 of a GCM  
16:45 **HAGEMANN, S.; KLEIDON, A.**  
HSA5- Influence of rooting depth on the simulated hydro-  
027 logical cycle of a GCM  
17:00 **END OF SESSION**  
17:00 **Opening**  
19:30 **Reception**

## **HSA5 Open session on hydrology and surface hydrological processes - Poster Session**

Convener: Kiely, G.  
Co-Convener(s): Bormann, H.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS  
Chairperson: Bormann, H.  
Editor: Kiely, G.

- HS051** **GREGORIS, Y.; SCHOBER, A.; BERNARD, P.**  
HSA5-028 **CORIANDRE, TOPMODEL, DPFT: comparison**  
of three watershed model concepts in research of  
an appropriate real time flood forecasting tool  
**HS052** **AHONEN, J.; RANKINEN, K.**  
HSA5-029 **SMART2 model application to two forested**  
catchments in Finland: effects of emission reduc-  
tion scenarios  
**HS053** **CORTADA HINDERSIN, F.; SEMPERE**  
HSA5-030 **TORRES, D.; KEBEN, K.; FRANKS, S.**  
Modelling by using topographic information.  
Application of TOPMODEL to a Mediterranean  
basin  
**HS054** **OLTCHEV, A.; IBROM, A.; KREILEIN, H.;**  
HSA5-031 **MORGENSTERN, K.; GRAVENHORST, G.**  
Evaluation of the response of Spruce forest  
ecosystem on climatic changes: results of model-  
ling experiments

- HS055 SLEPAK, Z.  
HSA5-032 Geophysics for studying the dynamics of near-surface underground water in modern urban conditions
- HS056 GALBIATI, G.L.; SAVI, F.  
HSA5-033 Temporal variability of effective values of soil hydraulic properties at the field scale
- HS057 GONCHAROV, A.V.; TUGAROVA, M.A.  
HSA5-034 Hydrocarbons and geochemical processes in the bottom environment of Russian seas coastal zones
- HS058 TUGROVA, M.A.; GONCHAROV, A.V.; KOVALCHUC, D.V.  
HSA5-035 The transformation of dynamic parameters of oil-contaminated sediments the north European Russia
- HS059 KUCHMENT, L.S.; POUROVSKIY, L.V.  
HSA5-036 Hurst's law in the variations of the Kaspian sea level and the estimating the ranges of this variations

## HSA6 Hydrology and soil processes

### .1 Recent advances in tracers in vadose zone hydrology

Convener: Tyler, S.W.

Co-Convener(s): Edmunds, W.M.; Flury, M.; Scanlon, B.R.  
**Tuesday, 21 April 1998**

Lecture Room: MYKONOS

Chairpersons: Tyler, S.W.; Scanlon, B.R.

- 08:45 FLURY, M.  
Use of dye tracers for the identification of solute transport in the vadose zone
- 09:00 KUNG, K.-J.S.; KLADIVKO, E.; JAYNES, D.; GISH, T.; KANWAR, R.; HELLING, C.F.; GEOHRING, L.D.; STEENHUIS, T.S.  
Partition preferential flow by sequentially applying conservative tracers
- 09:15 STAMM, C.; FLÜHLER, H.; SERMET, R.; LEUENBERGER, J.; WUNDERLIN, H.; WYDLER, H.  
Preferred flow paths in a drained grassland plot
- 09:30 ZEHE, E.; PLATE, E.  
Preferential flow in a small agricultural catchment: field study and upscaling concept
- 09:45 LICHNER, L.  
Radioactive tracer techniques used in soil hydrology
- 10:00 DAHAN, O.; NATIV, R.; ADAR, E.M.; BERKOWITZ, B.  
Flow through fractures in Vadose chalk
- 10:15 WEISBROD, N.; NATIV, R.; ADAR, E.; RONEN, D.  
Colloidal particles as natural tracers for processes in unsaturated fractured chalk
- 10:30 BREAK

Chairpersons: Flury, M.; Edmunds, W.M.

- 11:00 SCANLON, B.R.  
Uncertainties in estimating water fluxes and dating pore water in an arid unsaturated system
- 11:15 GEE, G.W.; TYLER, S.W.  
Analysis of chloride mass balance in a field lysimeter

- 11:30 GUTIERREZ-OJEDA, C.  
Recharge estimation of the Conejos-Medanos aquifer system, northern Mexico
- 11:45 GEHRELS, J.C.; DE VRIES, J.J.  
Application of chloride and oxygen-18 as vadose zone tracers under temperature climatic conditions
- 12:00 SONNLEITNER, M.; SCHULIN, R.  
Non-destructive investigation of the root zone with help of a deuterium-tracer
- 12:15 VANDERBORGHT, J.; DIELS, J.; GONZALEZ, C.; JACQUES, D.; KIM, D.-J.; MALLANTS, D.; TIMMERMAN, A.; VANCLOOSTER, M.; HUBRECHTS, L.; FEYEN, J.  
Overview of inert tracer experiments to characterise transport properties of some Belgian soils
- 12:30 END OF SUB-SESSION

## HSA6 Hydrology and soil processes

### .1 Recent advances in tracers in vadose zone hydrology - Poster Session

Convener: Tyler, S.W.

Co-Convener(s): Edmunds, W.M.; Flury, M.; Scanlon, B.R.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: AGORA 2 - HS

Chairperson: Tyler, S.W.

- HS061 BAUMANN, T.; SCHNEIDER, M.; NIESSNER, R.  
Application of sorptive tracers within waste disposals
- HS062 BELOUSOVA, A.P.; DUDUKALOV, A.P.  
Field investigation of the processes of highly mineralized brine migration in the unsaturated zone
- HS063 ELIET, V.; BIDOGLIO, G.; FERRARI, D.; SENA, F.; SPRINGER, A.; NIESSNER, R.; PANNE, U.  
Multiplexed four-dimensional fiber-optic fluorescence for in-situ detection of soil and groundwater tracers
- HS064 FEYEN, H.; PAPRITZ, A.; WUNDERLI, H.; FLÜHLER, H.  
A multiple tracing experiment to detect flowpaths in forest soils
- HS065 GANDOLA, F.; ABRIAK, N.E.; HAVERKAMP, R.  
Characterization of infiltration in unsaturated porous medium using fluorescence effects
- HS066 GERARD-MARCHANT, P.; BEAUDOING, G.; CALMELS, P.  
Radioactive tracers for the in situ and laboratory determination of the hydraulic properties of slowly permeable porous material
- HS067 JACQUES, D.; TIMMERMAN, A.; FEYEN, J.  
Measuring water flow and solute transport under natural boundary conditions in a loamy soil profile
- HS068 SCHNEGG, P.-A.  
An inexpensive flow-through field fluorometer for tracer tests
- HS069 WILLIAMS, A.; WARD, R.  
The use of fluorescent microspheres as tracers in the unsaturated zone of the Chalk

- HS070 **PEDERSEN, T.S.; TORGERSEN, J.; ALESTRÖM, P.**  
Tagged DNA-molecules as tracers in hydrogeology
- HS070A **LICHNER, L.; SVOBODA, A.; CIPAKOVA, A.**  
Cadmium transport in a structured loamy soil

## **HSA6 Hydrology and soil processes .2 Scale problems of soil hydrological measuring techniques**

Convener: Huwe, B.  
Co-Convener(s): Scherrer, S.  
**Tuesday, 21 April 1998**  
Lecture Room: MYKONOS  
Chairperson: N.N.

- 14:00 **OSWALD, B.; PELICAN, P.; ERNI, D.; BENEDICKTER, H.R.; BÄCHTOLD, W.; FLÜHLER, H.**  
Process tomography in the hydrological sciences: first results (Solicited Paper)
- 14:30 **KÄMPF, M.; HOLFELDER, T.; MONTENEGRO, H.**  
Inspection of the flow patterns and parameter estimation of capillary barrier systems at different scales
- 14:45 **VILAS, M.; SALVANY, C.; JOSA, R.; LATRON, J.; HERETER, A.; DALMAU, L.; CAAMERAS, N.**  
Characterization of soil hydraulic properties of a field unit using different methods
- 15:00 **SALVANY, C.; LLORENS, P.; GALLART, F.**  
Daily oscillations in soil tensiometry: a field experience
- 15:15 **CHANZY, A.; GAUDU, J.C.; MOHRATH, D.; CHADOEUF, J.**  
Soil moisture monitoring at field scale using automatic capacitance probes
- 15:30 **MERZ, B.; BARDOSSY, A.**  
Infiltration experiments and scale effects (Solicited Paper)
- 16:00 **DEURER, M.; DUIJNISVELD, W.H.M.; BOETTCHER, J.**  
Variography of water characteristic functions at the 10 m scale in a coniferous forest: comparison of laboratory and field methods
- 16:15 **FEYEN, H.; PAPRITZ, A.; WYDLER, H.; FLÜHLER, H.**  
Simple time series models to describe nonlinear runoff generation
- 16:30 **PIEHLER, H.; HUWE, B.**  
Scale effects of transport processes: application of renormalization and perturbation theory
- 16:45 **END OF SUB-SESSION**

## **HSA6 Hydrology and soil processes .2 Scale problems of soil hydrological measuring techniques - Poster Session**

Convener: Huwe, B.  
Co-Convener(s): Scherrer, S.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS

- HS072 **ROGASIK, H.; WENDROTH, O.; KOSZINSKI, S.; POHL, W.**  
Assessment of morphological properties based on calculation of internal and external heterogeneity
- HS073 **SPERL, C.; STANJEK, H.**  
The accuracy of water content measurements with ground-penetrating radar: a model experiment
- HS074 **KLEIN, M.**  
Modelling water dynamics in a large field lysimeter \*
- HS075 **BLYTH, E.**  
Representing soil water with simple models

## **HSA7 Open session on hydrology and living communities**

Convener: O'Kane, J.P.  
**Wednesday, 22 April 1998**  
Lecture Room: GALLIENI 2  
Chairperson: O'Kane, J.P.

- 15:30 **BONNET, M.P.; WESSEN, K.; IMBERGER, J.**  
3D limnological modelling: methodology and test case
- 15:45 **REGNIER, P.; WOLLAST, R.; O'KANE, J.P.**  
Modelling autotrophic and heterotrophic activity in macro tidal estuaries \*
- 16:00 **CAMPANA, M.E.; SMITH, K.E.; MORRICE, J.A.; VALETT, H.M.; DAHM, C.N.; UNNIKRISHNA, P.V.; BAKER, M.A.**  
Hyporheic zone residence times in first-order streams
- 16:15 **PACHUTA, K.**  
The chosen plant communities influence on river bed shape and bottom position changes \*
- 16:30 **BUCKLEY, A.; O'KANE, J.P.**  
Chaotic behaviour in models of aquatic ecosystems \*
- 16:45 **END OF SESSION**

\* not included in the Book of Abstracts

**HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**  
**.1 Natural attenuation and intrinsic bioremediation: field studies I**

Convener: Grathwohl, P.  
 Co-Convener(s): Totsche, K.-U.  
**Thursday, 23 April 1998**  
 Lecture Room: GALLIENI 2  
 Chairperson: Grathwohl, P.

- 14:00 CHRISTENSEN, T.H.  
 Natural attenuation of landfill leachate plumes? (Solicited Paper)
- 14:30 SCHIEDEK, T.; GRATHWOHL, P.; TEUTSCH, G.  
 Natural attenuation and plume lengths of organic contaminants
- 14:45 ANTHONY, T.; BARKER, J.F.  
 Investigation into the natural attenuation of a dissolved creosote plume
- 15:00 EISWIRTH, M.; HOETZL, H.; REICHERT, B.; WEBER, K.  
 Natural attenuation processes in a BTEX plume
- 15:15 SCHIRMER, M.; FRIND, E.O.; BARKER, J.F.  
 A natural gradient field experiment at Borden - investigation of natural attenuation processes of BTEX and MTBE
- 15:30 VISSERS, M.J.M.; FRAPPORTI, G.; HOOGENDOORN, J.H.; VRIEND, S.P.  
 Hydrochemistry is more than transport using hydrology
- 15:45 KARAPANAGIOTI, H.K.; SABATINI, D.A.; GRATHWOHL, P.  
 Attenuation by natural and enhanced sorption of HOCs in a landfill leachate
- 16:00 APPERT-COLLIN, J.C.; DRIDI-DHAOUADI, S.; SIMONNOT, M.O.; SARDIN, M.  
 Effects of the non linear sorption of polycyclic aromatic hydrocarbons on their transport properties in organic soils
- 16:15 RÜGGE, K.; HOFSTETTER, TH.B.; HADERLEIN, S.B.; BJERG, P.L.; KNUDSEN, S.; ZRAUNIG, C.; MOSBAEK, H.; CHRISTENSEN, TH.H.  
 Characterization of predominant reductants in an anaerobic aquifer by reactive probe compounds
- 16:30 WEIGAND, H.; TOTSCHKE, K.U.; KOEGEL-KNABNER, I.; ANNWEILER, E.; RICHNOW, H.H.  
 Anthracene transport through an unsaturated layered soil column as influenced by retardation and intrinsic biodegradation
- 16:45 END OF PART I

**Hydrology and Earth System Sciences**

the new EGS journal for the publication of original research in hydrology viewed as a separate geoscience

**HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**  
**.1 Natural attenuation and intrinsic bioremediation: field studies - Poster Session**

Convener: Grathwohl, P.  
 Co-Convener(s): Totsche, K.-U.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: AGORA 2 - HS  
 Chairpersons: Grathwohl, P.; Totsche, K.-U.

- HS076 DANZER, J.; KLEIN, R.; SETARGE, B.; GRATHWOHL, P.  
 In-situ characterization of NAPL aquifer contamination by partitioning and interfacial tracers
- HS077 FERREIRA, S.B.; GRATHWOHL, P.; ZUQUETTE, L.V.  
 Partition of aromatic hydrocarbons from oxygenated gasolines into water
- HS078 LENDVAY, J.M.; DEAN, S.M.; ANDRIAENS, P.  
 Temporal and spatial trends with biogeochemistry at a groundwater-surface water interface: implications for microbial bioremediation processes
- HS079 HERFORT, M.; PTAK, T.; TEUTSCH, G.  
 Investigation of natural attenuation of organic groundwater contaminants at field scale
- HS080 BUZZELLI, M.; CARRERA, P.; GAVINELLI, M.  
 Intrinsic bioremediation of virgin naphta impacted site
- HS081 SCHEIBKE, R.; OTTENBREIT, M.; GEISEN, S.  
 Monitoring contaminated sites - balancing treatment expenses and the costs for thorough site characterisation
- HS082 SIMONNOT, M.O.; HARMAND, B.; SARDIN, M.  
 Modelling the transient transport of non linearly interacting dissolved volatile organic compounds: experimental validation by column experiments
- HS083 RICHNOW, H.H.; ANNWEILER, E.; MICHAELIS, W.  
 Tracing the transformation of polycyclic aromatic hydrocarbons (PAH) during microbial degradation with stable isotope labelled substances in soils
- HS084 KOMATINA, S.  
 Role of geophysics in aquifer vulnerability assessment
- HS085 DUDAREV, O.V.; ANIKIYEV, V.V.; SAID, M.A.; BOTSUL, A.I.; UTKIN, I.V.; SHUMILIN, YE.N.  
 Features of the geochemical anomaly assumed from the contents of some chemical elements in Mediterranean Sea waters near the Nile river delta
- HS086 YASUHARA, M.; MARUI, A.; KAZAHAYA, K.  
 Differences in stable isotopic composition of groundwater between the slopes - a case study on Mt. Yatsugatake and Mt. Fuji, Japan

HS

HS087 GUIMERA, J.; FONT, J.; CARRERA, J.;  
CARDONA, F.  
Karst in an active salt rock dome

## **HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**

### **.1 Natural attenuation and intrinsic bioremediation: field studies II**

Convener: Grathwohl, P.  
Co-Convener(s): Totsche, K.-U.  
**Friday, 24 April 1998**  
Lecture Room: GALLIENI 2  
Chairperson: Totsche, K.-U.

- 08:30 REINHARD, M.; LEBRON, C.A.  
Natural attenuation of aromatic hydrocarbon and  
haloaliphatic compounds in ground water (Solicited  
Paper)
- 09:00 FASS, S.; GANAYE, V.; LOUIS-ROSE, K.;  
VOGEL, T.; BLOCK, J.-C.  
Biodegradation of organics in soil
- 09:15 ADRIAENS, P.; LENDVAY, J.V.; BARCELONA,  
M.J.; HAACK, S.K.; SAUCK, W.  
Evaluation of natural bioattenuation at the macro-  
and microscopic level: field implementation of novel  
monitoring methods
- 09:30 HOEHENER, P.; BOLLIGER, C.; HUNKELER, D.;  
ZEYER, J.  
Intrinsic bioremediation of a petroleum  
hydrocarbon-contaminated aquifer: assessment by  
stable carbon and sulfur isotopes
- 09:45 KREUSER, T.; STORM VAN LEEUWEN, E.  
In situ bioremediation in case studies, NL
- 10:00 PACKWOOD, C.R.X.; LERNER, D.N.  
An investigation of the biodegradation of phenolics  
within the Vadose zone
- 10:15 GOVINDARAJU, R.S.; NEDUNURI, K.V.;  
BANKS, M.K.; SCHWAB, A.P.  
Field evaluation of phytoremediation strategies in  
TPH degradation
- 10:30 END OF SUB-SESSION

## **HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**

### **.2 New developments in in-situ treat- ment of subsurface contaminations**

Convener: Rijnaarts, H.H.M.  
Co-Convener(s): Bosma, T.N.  
**Thursday, 23 April 1998**  
Lecture Room: GALLIENI 2  
Chairperson: N.N.

- 11:00 RIJNAARTS, H.H.M.  
Introduction
- 11:15 SABATINI, D.; KNOX, R.; HARWELL, J.  
Surfactant selection for enhanced subsurface  
remediation: laboratory and field observations  
(Solicited Paper)

11:45 JOSEF, R.; BARCZEWSKI, B.; KOSCHITZKY,  
H.-P.

Hydraulic in-situ remediation techniques with  
surfactants: optimization of hydraulic systems

12:00 SCHLICKER, O.; WÜST, W.; DAHMKE, A.

The effect of dissolved inorganic groundwater  
constituents on the reactivity of FE(O)-reactive walls  
- laboratory studies and thermodynamic calculations

12:15 SCHÜTH, C.; KRAFT, S.; GRATHWOHL, P.;  
REINHARD, M.

Catalytic hydrogenation of aromatic compounds with  
palladium - influence of support materials on deacti-  
vation

12:30 VAN LIERE, H.C.; VAN AALST-VAN  
LEEUVEN, M.A.; RIJNAARTS, H.H.M.

In situ biodegradation of hexachlorocyclohexane  
(HCH)

12:45 BOSMA, T.N.P.

Enhancement of biodegradation in biologically  
activated zones

13:00 END OF SUB-SESSION

## **HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**

### **.2 New developments in in-situ treat- ment of subsurface contaminations - Poster Session**

Convener: Rijnaarts, H.H.M.  
Co-Convener(s): Bosma, T.N.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS

- HS088 BIESTER, H.; SCHUHMACHER, P.;  
MUELLER, G.  
Mercury removal from groundwater - activated  
S-charcoal adsorption versus Hg<sup>2+</sup> reduction by  
tin and Hg(0) stripping
- HS089 ABBONDANZI, F.; IACONDINI, A.;  
MALASPINA, F.; GAGNI, S.; CARNEVALI,  
M.; HANNULA, H.; SERRA, R.  
Preliminary kinetic studies for an in situ  
bioremediation treatment: toluence removal from  
an aquifer
- HS090 BONKHOFF, K.; DIERKES, F.; HAEGEL,  
F.-H.; SUBKLEW, G.; THIELE, P.  
Bicontinuous microemulsions - a new extraction  
medium for in situ remediation
- HS091 VAN GROENESTIJN, J.W.; GRIFFIOEN, J.;  
BRUNIA, A.; VAN BUIJSEN, H.J.J.  
In situ bio-electrochemical nitrate removal from  
groundwater
- HS092 SKOURAS, E.  
Dissolution and mobilization of dispersed NAPL  
in porous media
- HS093 AVRAAM, D.G.; PAYATAKES, A.C.  
Dissolution and mobilization of dispersed NAPL  
in porous media by surfactant flooding
- HS094 DAVIDSON, L.D.  
Anthropogenic pollution of river basins in the  
former Soviet Union

- HS094A **KOUSSIS, A.D.; PESMAJOGLOU, S.; SYRIOPOULOU, D.**  
A criterion for the use of the instantaneous reaction assumption in the modelling of the biodegradation of hydrocarbons in aquifers \*

**HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**  
**.3 Redox processes in aquifers - Poster Session**

Convener: Behra, Ph.

Co-Convener(s): Isenbeck-Schröter, M.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 2 - HS

Chairperson: Isenbeck-Schröter, M

- HS095 **LOYAUX, S.; REFAIT, PH.; LECOMTE, P.; EHRHARDT, J.J.; GENIN, J.M.**  
The reduction of chromate ions by Fe(II) species
- HS096 **JORAND, F.; APPENZELLER, B.; ABDELMOULA, M.; BLOCK, J.C.; GENIN, J.M.**  
Ferrogenous minerals formation in pure culture of Fe(III) reducing bacteria
- HS097 **LEDoux, E.; MADE, B.; LOUVAT, D.; BLANC, P.L.**  
Hydro-geochemical modelling of a reactor zone in Bangombe (Gabon): characterization of redox processes
- HS098 **MALINOVSKY, D.N.; KUDRYAVTSEVA, L.P.**  
Aspects of contaminants migration from waste rock of Khibiny mines
- HS099 **ZHENG, Z.; AAGAARD, P.**  
Analyses of the anaerobic degradation of water-soluble organic compounds in aquific environments

**HSA8 Hydrology and chemical processes - restoration of aquifers: natural and artificial attenuation**  
**.3 Redox processes in aquifers**

Convener: Behra, Ph.

Co-Convener(s): Isenbeck-Schröter, M.

Friday, 24 April 1998

Lecture Room: GALLIENI 2

Chairperson: Behra, Ph.

- 11:00 **JAKOBSEN, R.; HANSEN, L.K.; POSTMA, D.**  
Rates of terminal electron accepting processes in an anoxic aquifer (Solicited Paper)
- 11:30 **PEIFFER, S.; PEINE, A.; TRITSCHLER, A.; KÜSEL, K.**  
Redox chemistry of iron and sulfur at the interface between sediment and ground-water of acid mine lakes
- 11:45 **GENIN, J.-M.R.; REFAIT, PH.; SIMON, L.; ABDELMOULA, M.; LOYAUX, S.; EHRHARDT, J.-J.; BOURRIE, G.; TROLARD, F.**  
Potentiality for using Fe(II)-Fe(III) green rust mineral for water remediation by redox processes

- 12:00 **EBERT, M.; ISENBECK-SCHRÖTER, M.; KÖLLING, M.**  
Reduction and retention of chromate contaminations under sulphidic conditions - system evaluation in column experiments
- 12:15 **BONNISSEL-GISSINGER, P.; BEHRA, PH.; EHRHARDT, J.J.**  
Effect of pH on surface composition of pyrite
- 12:30 **MÜLLER, J.; SEILER, K.-P.**  
Bonding and mobility of heavy metals in roasted pyrites - a comparison between sequential extraction and long-term elution experiments
- 12:45 **BASBERG, L.; ENGESGAARD, P.; DAGESTAD, A.**  
Gechemical transport modelling of leachate attenuation in quaternary sediments dominated by pyrite reduction and calcite dissolution: model testing against field data from the Trandum Landfill, Norway
- 13:00 LUNCH

Chairperson: Isenbeck-Schröter, M

- 14:00 **HOFSTETTER, TH.B.; HADERLIEN, S.B.; SCHWARZENBACH, R.P.**  
Abiotic reduction of organic pollutants under ferrogenic conditions (Solicited Paper)
- 14:30 **LIGER, E.; CHARLET, L.**  
Catalytic role of mineral surfaces in redox reactions in subsurface environment
- 14:45 **MERZ, CH.; WINKLER, A.; SIECKMANN, I.**  
Migration behavior of trace metals under changing redox conditions in the shallow aquifer of a mesoscale Oder river polder (Oberbruch)
- 15:00 **BUTLER, E.C.; HAYES, K.F.**  
Trends in the transformations of halogenated organic pollutants by iron sulfide
- 15:15 **KOZEL, R.; KENNEDY, K.; ZOBRIST, J.; ROSSI, P.**  
Redox condition heterogeneity and its influence on chemical, microbiological and hydrodynamic characteristics in a waste plume (W. Switzerland)
- 15:30 BREAK

Chairperson: Behra, Ph.

- 16:00 **RIOU, C.; GRUAU, G.; DIA, A.; MOLENAT, J.; DURAND, P.**  
Rare Earth elements as tracers of redox processes in shallow groundwaters
- 16:15 **PEIFFER, S.**  
Redox measurements - a theoretical consideration based on electrode kinetics
- 16:30 **LOYAUX, S.; REFAIT, PH.; LECOMTE, P.; EHRHARDT, J.J.; GENIN, J.M.**  
The reduction of chromate ions by Fe(II) species (Poster)
- 16:35 **JORAND, F.; APPENZELLER, B.; ABDELMOULA, M.; BLOCK, J.C.; GENIN, J.M.**  
Ferrogenous minerals formation in pure culture of Fe(III) reducing bacteria (Poster)
- 16:40 **LEDoux, E.; MADE, B.; LOUVAT, D.; BLANC, P.L.**  
Hydro-geochemical modelling of a reactor zone in Bangombe (Gabon): characterization of redox processes (Poster)

HS

- 16:45 **MALINOVSKY, D.N.; KUDRYAVTSEVA, L.P.**  
Aspects of contaminants migration from waste rock of Khibiny mines (Poster)
- 16:50 **ZHENG, Z.; AAGAARD, P.**  
Analyses of the anaerobic degradation of water-soluble organic compounds in aquifer environments (Poster)
- 16:55 **END OF SESSION**

## **HSA9 Hydrology and applied mathematics .1 Process representation in hydrological models - can it be achieved? I**

Convener: Gallart, F.  
Co-Convener(s): White, S.M.  
**Thursday, 23 April 1998**  
Lecture Room: GALLIENI 3  
Chairperson: Beven, K.  
Editors: White, S.M.; Gallart, F.

- 14:00 **BEVEN, K.**  
HSA9.1-001 Model identifiability and constraining process representations in modelling runoff production (Solicited Paper)

### The VAHMPIRE project

- 14:30 **GALLART, F.; WHITE, S.M.**  
HSA9.1-002 Interaction between hydrological modelling and field work at the catchment scale: the VAHMPIRE project
- 14:45 **ANDERTON, S.; WHITE, S.**  
HSA9.1-003 Problems associated with the parameterization of physically-based hydrological models: an example
- 15:00 **LATRON, J.; SALVANY, C.; GALLART, F.**  
HSA9.1-004 From point field measurements to catchment data sets for internal validation of models. I- example of the catchment water reserve
- 15:15 **LLORENS, P.; WHITE, S.M.**  
HSA9.1-005 From point field measurements to catchment data sets for internal validation of models. II example of rainfall interception
- 15:30 **ANDERTON, S.; LATRON, J.; LLORENS, P.; QUINN, P.; BUCHTELE, J.; CIARAPICA, L.**  
HSA9.1-006 Comparative validation of hydrological models: preliminary results
- 15:45 **SALVANY, C.; LATRON, J.; LLORENS, P.; GALLART, F.**  
HSA9.1-007 Soil water dynamics in a terraced system
- 16:00 **QUINN, P.; ANDERTON, S.**  
HSA9.1-008 Nesting localized models and data within catchment models and data
- 16:15 **CIARAPICA, L.; TODINI, E.**  
HSA9.1-009 TOPKAPI: a new approach to rainfall-runoff modelling
- 16:30 **HIGY, C.; IORGULESCU, I.; MUSY, A.**  
HSA9.1-010 Digital terrain analysis of the Haute-Mentue catchment (Switzerland) and scale effect for hydrological modelling with TOPMODEL
- 16:45 **JÖRIN, C.; IORGULESCU, I.; MUSY, A.**  
HSA9.1-011 Uncertainty analysis of geochemical mixing models and implications for processes conceptualisation
- 17:00 **END OF PART I**

## **HSA9 Hydrology and applied mathematics .1 Process representation in hydrological models - can it be achieved? - Poster Session**

Convener: Gallart, F.  
Co-Convener(s): White, S.M.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS  
Chairperson: White, S.M.  
Editors: White, S.M.; Gallart, F.

- HS100 **SEIBERT, J.; UHLENBROOK, S.; LEIBUNDGUT, C.; HALLDIN, S.**  
HSA9.1-029 Multiscale calibration and validation of a conceptual rainfall-runoff model
- HS101 **GOMEZ-PLAZA, A.; CASTILLO, V.M.; MARTINEZ-MENA, M.**  
HSA9.1-030 Hydrologic similarity: dimensionless similarity parameters obtained from KINEROS model
- HS102 **CASTILLO, V.; MARTINEZ-MENA, M.**  
HSA9.1-031 An assessment of three models ability to represent the rainfall-runoff relationships from semiarid areas
- HS103 **CHUBARENKO, I.P.**  
HSA9.1-032 Field experiment in an effort of modelling
- HS104 **GAVRILOV, A.G.; NEPRIMEROV, N.N.; LI, L.; OVHCINNIKOV, M.N.; SHTANIN, A.V.**  
HSA9.1-033 Hydrodynamic methods for evaluation of field of saturation by the oil a stratum

## **HSA9 Hydrology and applied mathematics .1 Process representation in hydrological models - can it be achieved? II**

Convener: Gallart, F.  
Co-Convener(s): White, S.M.  
**Friday, 24 April 1998**  
Lecture Room: GALLIENI 3  
Chairperson: White, S.M.  
Editors: White, S.M.; Gallart, F.

### Processes

- 08:30 **SLOAN, W.**  
HSA9.1-012 A physics based storage-discharge function for modelling groundwater discharge
- 08:45 **SEIBERT, J.; BISHOP, K.**  
HSA9.1-013 Groundwater dynamics in conceptual rainfall-runoff models - looking for more realistic concepts
- 09:00 **MOORE, R.D.; HUTCHINSON, D.**  
HSA9.1-014 Throughflow variability in a shallow forest soil on a glaciated hillslope: implications for modelling
- 09:15 **WHITAKER, A.C.; ALILA, Y.; CALVERT, P.; TOEWS, D.**  
HSA9.1-015 Hydrological modelling to access the consequences of forest management scenarios on snow accumulation, melt, and peak flows in interior British Columbia
- 09:30 **SOPHOCLEOUS, M.A.; KOELLIKER, J.K.; GOVINDARAJU, R.S.; BIRDIE, T.; RAMIREDDYGARI, S.R.; PERKINS, S.P.**  
HSA9.1-016 Integrated numerical modelling of the Rattlesnake Creek basin in Kansas, USA

- 09:45 GOMEZ-AMELIA, D.; SCHNABEL, S.;  
HSA9.1- CEBALLOS, A.; GALLART, F.  
017 Hydrological response of a small catchment in semiarid environments (SW, Spain) and model applications
- 10:00 VIEUX, B.E.; CAPPELAERE, B.; PEUGEOT, C.  
HSA9.1- Influence of channel losses on spatially distributed rainfall-runoff simulation in a small endoreic catchment in the Sahel region, Niger, Africa  
018
- 10:15 BERTHIER, E.; ANDRIEU, H.; RAIMBAULT, G.;  
HSA9.1- CREUTIN, J.D.  
020 A physically based approach of urban rainfall-runoff modelling
- 10:30 BREAK

Chairperson: Moore, R.D.  
Editors: White, S.M.; Gallart, F.

#### Modelling issues

- 11:00 SEIBERT, J.; BISHOP, K.  
HSA9.1- A genetic algorithm for multi-criteria calibration of conceptual rainfall-runoff models  
021
- 11:15 VIEUX, B.E.; LEDIMET, F.; ARMAND, D.  
HSA9.1- Inverse problem formulation for spatially distributed river basin model calibration using the adjoint method  
022
- 11:30 MOREDA, F.; BAUWENS, W.  
HSA9.1- A conceptual 10 days water balance model with step wise parameter optimization  
023
- 11:45 MOLENAT, J.; DAVY, P.; GASCUEL-ODOUX, C.; DURAND, P.  
HSA9.1- Spectral and cross-spectral analysis of three hydrological systems  
024
- 12:00 MOUSSA, R.  
HSA9.1- On the use of the diffusive wave model to identify geomorphologic transfer function from digital elevation models  
025
- 12:15 KUO, W.-L.; STEENHUIS, T.S.; MCCULLOCH, C.E.; MOHLER, C.L.; WEINSTEIN, D.;  
HSA9.1- DEGLORIA, S.D.; SWANEY, D.; ZOLLWEG, J.A.; FRANKENBERGER, J.A.  
026 Scaling effects on runoff and moisture content in a GIS-based, variable-source-area hydrology model
- 12:30 MAUSER, W.  
HSA9.1- The modelling of the water cycle within a GIS based SVAT-model framework  
027
- 12:45 DI GIAMMARCO, P. FRANCHINI, M.;  
HSA9.1- LAMBERTI, P.  
028 The construction of the rating curve in river cross sections by using level data and a parameterized formulation of the De Saint Venant equations
- 13:00 END OF SESSION

#### Attend the Poster Sessions

and the

#### Exhibition

### HSB1 Water resources research .1 Water resources of international river basins

Convener: Savenije, H.H.  
Co-Convener(s): van der Zaag, P.  
**Wednesday, 22 April 1998**  
Lecture Room: MYKONOS  
Chairperson: N.N.

- 09:00 MOSTERT, E.  
Perspectives on river basin management (Solicited Paper)
- 09:30 THAMAE, L.  
Legal and institutional framework for the management of shared water resources in the SADC region
- 09:50 TUMBARE, M.J.  
Equitable sharing of the water resources of the Zambezi river basin
- 10:10 VAN DER ZAAG, P.; SAVENIJE, H.H.G.  
The management of EU and SADC river basins compared
- 10:30 AERTS, J.C.J.H.; VAN DEURSEN, W.P.A.; KRIEK, M.; SCHEPEL, M.  
STREAM (Spatial Tools for River basins and Environment and Analysis of Management options): "The Ganges, Brahmaputra, Meghna river basin"
- 10:50 VAN AST, J.A.  
Trends to interactive watermanagement: developments in international management of river basins
- 11:10 VAN DER VEEREN, R.  
Least cost emission reductions in transboundary river basins: the case of diffuse emissions of nutrients in the Rhine river basin
- 11:30 TCHIJOVA, E.  
Seasonal fluctuations of evaporation from a water surface
- 11:50 END OF SUB-SESSION
- 12:00 Business Meetings

### HSB1 Water resources research .2 Influence of environmental and antropogenic change on flood processes (co-sponsored by NH) - Post-er Session

Convener: Blöschl, G.  
Co-Convener(s): Burlando, P.  
Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 2 - HS

- HS105 ADAR, E.M.; LARONE, J.B.; HATUKAI, P.  
The role of desert floods in spreading pollution along an Alluvial aquifer: the northern Negev desert, Israel
- HS106 ARNAEZ, J.; GARCIA-RUIZ, J.M.; MARTI-BONO, C.; WHITE, S.M.; MORENO, A.; BORDONABA, A.P.  
Forest and farmland abandoned catchments: a comparison of flood processes
- HS107 SADYKOV, D.; LEVCHENKO, I.  
Dynamic model of the non-outletted reservoir (DMROR) and prognosis its level of change

HS



**HSB1 Water resources research**  
**.2 Influence of environmental and antropogenic change on flood processes (co-sponsored by NH)**

Convener: Blöschl, G.  
 Co-Convener(s): Burlando, P.  
**Friday, 24 April 1998**  
 Lecture Room: GALLIENI 5  
 Chairperson: Blöschl, G.

- 14:00 **BLÖSCHL, G.**  
 Introduction
- 14:05 **ROSSO, R.**  
 Modelling climate and man-induced effects for flood risk assessments: open problems and research perspectives (Solicited Paper)
- 14:35 **ROALD, L.A.; NJOS, A.**  
 HYDRA - a Norwegian research programme on floods
- 14:50 **BEHR, O.; BLÖSCHL, G.; PIOCK-ELLENA, U.**  
 A digital data base of catchment characteristics for assessing anthropogenic effects on flood processes
- 15:05 **COGNARD-PLANCO, A.L.; MARC, V.; TRAVI, Y.; DIDON-LESCOT, J.F.**  
 Hydrology and forest: a modelling approach on the Mont Lozere (France)
- 15:20 **KATZENMAIER, D.; UHLENBROOK, S.; LEIBUNDGUT, CH.; BRONSTERT, A.**  
 Land-use changes influencing storm runoff generation and the potential of decentralized flood retention measures to compensate for such changes - a survey
- 15:35 **ADAR, E.M.; LARONE, J.B.; HATUKAI, P.**  
 The role of desert floods in spreading pollution along an Alluvial aquifer: the northern Negev desert, Israel (Poster)
- 15:38 **ARNAEZ, J.; GARCIA-RUIZ, J.M.; MARTI-BONO, C.; WHITE, S.M.; MORENO, A.; BORDONABA, A.P.**  
 Forest and farmland abandoned catchments: a comparison of flood processes (Poster)
- 15:41 **SADYKOV, D.; LEVCHENKO, I.**  
 Dynamic model of the non-outletted reservoir (DMROR) and prognosis its level of change (Poster)
- 15:44 **BREAK**

Chairperson: Burlando, P.

- 16:00 **GOTTSCHALK, L.; SAELTHUN, N.-R.; KRASOVSKAIA, I.**  
 Risk of flooding and probability of extreme floods (Solicited Paper)
- 16:30 **OSTROWSKI, M.W.; LEICHTFUSS, A.**  
 Human impacts on the formation of flash floods and measures for their compensation
- 16:45 **BURTON, A.; O'CONNELL, P.E.**  
 Sensitivity analysis of the frequency of flood events to landuse change \*
- 17:00 **ORLANDINI, S.; DALL'AGATA, L.; BRATH, A.**  
 On the impact of flood-control reservoirs on hydrologic risk
- 17:15 **ADLER, M.-J.; BUTA, C.**  
 Influence of the environmental and antropogenic change on flood processes of the inferior sector of the Danubian River

17:30 **PECKHAM, S.D.**  
 Flow routing in large river basins

17:45 Discussion

18:00 **END OF SESSION**

**HSB1 Water resources research**  
**.3 Remote sensing and GIS in hydrology - Poster Session**

Convener: Baret, F.  
 Co-Convener(s): Estrela, T.; Stips, A.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: AGORA 2 - HS

- HS108 **ERREA, M.P.; GONZALEZ, C.; GARCIA-RUIZ, J.M.; WHITE, S.M.**  
 Assessment of soil humidity and sediment sources in small catchments using GIS
- HS109 **BOEGH, E.; SOEGAARD, H.**  
 Estimation of transpiration from sparse vegetation
- HS110 **CAMPLING, P.; GOBIN, A.; EERENS, H.; FEYEN, J.**  
 Landsat TM as a tool for mapping the land cover of a humid tropical catchment
- HS111 **FIORUCCI, P.; MINCIARDI, R.; LA BARBERA, P.; LANZA, L.**  
 On the use of the multisensor data for reconstruction of the rainfall field at different scales
- HS112 **RUMYANTSEV, V.; GRIBIN, S.; BALACHEVTSEV, M.**  
 GIS of water objects of Karelian Isthmus (north-west of Russia)

**HSB1 Water resources research**  
**.3 Remote sensing and GIS in hydrology**

Convener: Baret, F.  
 Co-Convener(s): Estrela, T.; Stips, A.  
**Friday, 24 April 1998**  
 Lecture Room: GALLIENI 5  
 Chairperson: Baret, F.

Remote sensing

- 08:30 **SCHMUGGE, T.; KUSTAS, W.P.**  
 The use of multi-layer remotely sensed data for estimating surface heat fluxes
- 08:45 **LOBO, A.**  
 Temporal series of AVHRR-NDVI imagery of Iberia; hydrological significance
- 09:00 **ESTRELA, T.; ALVAREZ, J.**  
 Calculation of P.E.T. in Spain using geographical information systems
- 09:15 **RUIZ, J.M.**  
 Distribution hydrological modelling in a large basin using a raster type GIS
- 09:30 **TROUFLEAU, D.; SOGAARD, H.**  
 Combining satellite, ground-based and assimilated data for estimating regional land surface evaporation
- 09:45 **HESSLING, M.**  
 Distributed modelling using different routing algorithms and validation against remotely sensed data

- 10:00 **MACELLONI, G.**; PALOSCIA, S.; PAMPALONI, P.; SIGISMONDI, S.  
Estimating hydrological parameters with multifrequency SAR data
- 10:15 **ANDA, A.**  
Problems at soil borne remote sensing use under Hungarian changeable weather
- 10:30 **BREAK**

Chairperson: Estrela, T.

## GIS

- 11:00 **BARRETT, E.C.**; **BEAUMONT, M.**; **TODD, M.C.**; **BROWN, P.A.**; **TABERNER, M.J.**; **LA BARBERA, P.**; **LANZA, L.G.**  
A unified rainfall climatology of the Mediterranean obtained by satellite and surface data
- 11:15 **ROTT, H.**; **BAUMGARTNER, M.**; **FERGUSON, R.**; **JOHANSSON, B.**; **PIRKER, O.**; **QUEGAN, S.**; **WRIGHT, G.**  
The HYDALP project: towards operational remote sensing applications in snow hydrology
- 11:30 **BRAZIER, R.E.**; **ROWAN, J.S.**; **QUINN, P.**  
The use of a national GIS database for soil erosion modelling in the U.K. using a minimum information requirement approach
- 11:45 **WEGEHENKEL, M.**; **STEIDL, J.**  
Results of the GIS based conceptual hydrologic model ARC-EGMO in comparison with the grid based fully distributed deterministic hydrologic model MIKE-SHE
- 12:00 **CAMPLING, P.**; **GOBIN, A.**; **DECKERS, J.**; **FEYEN, J.**  
Deriving pedo-hydrological characteristics of a humid, tropical catchment (south eastern Nigeria) by soil-landscape modelling
- 12:15 **CHERNOOK, V.I.**; **MELENTYEV, V.V.**; **PLUSHYEV, V.A.**; **VOSTROV, E.A.**; **SHUBINA, M.A.**  
Water resources of the Russian Arctic onshores (river mouths and permafrost): experience of X, L, P, VHF SAR-diagnostic
- 12:30 **BELZ, S.**; **VOGT, T.**; **BELDJOUDI, L.**  
Determination of runoff parameters in northern Algeria using remote sensing data and GIS
- 12:45 **END OF SUB-SESSION**

## **HSB1 Water resources research** **.4 Influence of landuse and moisture feedback on continental rainfall**

Convener: Savenije, H.H.  
Co-Convener(s): Bronstert, A.; Ulbrich, U.  
**Wednesday, 22 April 1998**  
Lecture Room: MYKONOS  
Chairperson: Mölders, N.

- 14:00 **XUE, Y.**; **OKI, T.**  
Biosphere feedback on rainfall and runoff in tropical North Africa (Solicited Paper)
- 14:30 **ELTAHIR, E.A.B.**  
The feedback between soil moisture conditions and rainfall processes

- 14:45 **ENTEKHABI, D.**  
Continental precipitation recycling and variability of large scale water balance with land-atmosphere interaction
- 15:00 **HECK, P.**; **LÜTHI, D.**; **SCHÄR, C.**  
The influence of vegetation on moisture feedback mechanisms and summertime rainfall in a regional climate model
- 15:15 **CLARK, D.B.**; **XUE, Y.**; **HARDING, R.J.**; **VALDES, P.J.**  
Impact of land surface degradation on climate in tropical North Africa
- 15:30 **MÖLDERS, N.**  
Comparison of the rainfall and evapotranspiration predicted for a landscape of 1930, 1986 and different opencast mining succession landscapes
- 15:45 **DE GROEN, M.M.**  
A calibrated threshold-value of the precipitable water compared to energy conditions in the atmosphere
- 16:00 **TAYLOR, C.M.**  
Convective scale rainfall persistence in the Sahel
- 16:15 **DE RIDDER, K.**  
The impact of surface evaporative fraction on the potential for convective precipitation
- 16:30 **RAGETTE, G.**  
The evaporation of rain and snowfall in the subcloud layer
- 16:45 **END OF SUB-SESSION**

## **HSB2 Water resources engineering and management** **.1 Water scarcity**

Convener: Savenije, H.H.  
Co-Convener(s): Bruen, M.  
**Thursday, 23 April 1998**  
Lecture Room: GALLIENI 5  
Chairperson: N.N.

- 11:00 **APPELGREN, B.**; **KLOHN, W.**  
Management of water scarcity: a focus on social and economic options (Solicited Paper)
- 11:30 **ROCHSTRÖM, J.**  
On-farm green water estimates as a tool for increased food production in water scarce regions
- 11:45 **ROMASCHENKO, M.I.**; **ZHOVTONOG, O.I.**  
Methods of optimal irrigation management under the conditions of deficiency of water and power resources in the Ukraine
- 12:00 **TAPIAS, J.**; **SALGOT, M.**; **CASAS, A.**  
Determination of the maximum irrigation efficiency of golf courses in semi-arid Mediterranean climate
- 12:15 **GIJSBERS, P.J.A.**  
Libya's choices: desalination or the great man-made river project
- 12:30 **BELOUSOVA, A.P.**  
Risks and hazard assessment of changing groundwater ecological state
- 12:45 **PAPAIOANNOU, G.**; **MARKOPOULOS, P.**; **KERKIDES, P.**  
Short drought predictors for agricultural risks
- 13:00 **END OF SUB-SESSION**

SH

**HSB2 Water resources engineering and management**  
**.2 Sustainable development of watersheds and river processes**

Convener: Habersack, H.M.  
 Co-Convener(s): de Groen, M.  
**Thursday, 23 April 1998**  
 Lecture Room: GALLIENI 5  
 Chairperson: N.N.

- 14:00 HABERSACK, H.  
 Sustainable and ecologically sound development of watersheds and river processes (Solicited Paper)
- 14:30 ERGENZINGER, P.  
 Requirements for the sustainable development of mountain torrents
- 14:45 FERGUS, T.; BERG, G.  
 The morphological and hydrological impacts of gravel-mining in the Bovri, Norway
- 15:00 MAURER, M.  
 The effects of inaccurate input parameters on sediment transport calculations
- 15:15 PONCE-ALVAREZ, M.T.  
 Impact of reservoirs in river sediment transport regime - a case study in Tagus river basin
- 15:30 KRZYK, M.  
 Mathematical modelling of suspended load in Ptuj lake
- 15:45 SAENGER, N.; LENK, M.; TRÄBING, K.  
 The passage of river- and groundwater through a riffle
- 16:00 MONTENEGRO, H.; HOLFELDER, T.  
 Assessment of embankment removal effects on groundwater dynamics in an Elbe River floodplain
- 16:15 DUNBAR, M.J.; ACREMAN, M.; ELLIOTT, C.  
 River flow objectives: abstract concept or practical tool?
- 16:30 LECOMTE, V.; LE BISSONNAIS, Y.  
 Pesticides transfer by runoff and erosion from field to agricultural catchment
- 16:45 PIEGAY, H.; THEVENET, A.; CITTERIO, A.  
 Distribution of large woody debris along a mountain river continuum, the Drome river, France
- 17:00 KERSEBAUM, K.C.; EULENSTEIN, F.; SCHINDLER, U.  
 Simulation of nitrate pollution from agricultural used land in a small river catchment of north-east Germany
- 17:15 MAKHMUDOV, E.DJ.; SHERFETDINOV, L.Z.  
 Criteria of technogen transforming of river flow
- 17:30 END OF SUB-SESSION

**HSB2 Water resources engineering and management**  
**.2 Sustainable development of watersheds and river processes - Poster Session**

Convener: Habersack, H.M.  
 Co-Convener(s): de Groen, M.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:30 - 19:00**  
 Poster Area: AGORA 2 - HS

- HS113 HELMS, M.; LEIBUNDGUT, CH.  
 Time series analysis of discharges of the Saone river
- HS114 AREFJEV, N.; KONONOVA, M.; SAI, O.  
 Sustainable management of a river with a cascade system of hydro-power plants

**HSB2 Water resources engineering and management**  
**.3 Groundwater systems and management**

Convener: Kholghi, M.K.  
 Co-Convener(s): Candela, L.  
**Thursday, 23 April 1998**  
 Lecture Room: GALLIENI 2  
 Chairperson: N.N.

- 09:00 KROM, T.D.; ROSBJERG, D.  
 Optimization and decision analysis of remediation design
- 09:20 CAPILLA, J.E.; PAREDES, J.; ANDREU, J.; SAHUQUILLO, A.  
 Improvement of performance indicators due to conjunctive use of surface and groundwater in complex water resources systems
- 09:40 STEIDL, J.; MERZ, CH.; DANNOWSKI, R.  
 GIS based hydrogeological data models for groundwater modelling in mesoscale pleistocene water catchment
- 10:00 ROKHINSON, E.E.  
 Magnetic treatment of salt and ground water
- 10:20 END OF SUB-SESSION

**HSB2 Water resources engineering and management**  
**.3 Groundwater systems and management - Poster Session**

Convener: Kholghi, M.K.  
 Co-Convener(s): Candela, L.  
 Display Time: Monday, 09:00 - Friday, 12:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: AGORA 2 - HS

- HS115 FERNANDEZ-TURIEL, J.L.; GALINDO, G.; FERNANDEZ-CIRELLI, A.; ANTICH, N.; HERRERO, A.; LLORENS, J.F.  
 Development of control and decision systems applied to the management of complex hydrological resources

---

**Hydrology and Earth System Sciences**

the new EGS journal for the publication of original research in hydrology viewed as a separate geoscience

---

- HS116 **FERNANDEZ-TURIEL, J.L.**; LLORENS, J.F.; ANTICH, N.; ROIG, A.; LOBO, A.  
Application of non-conventional hydrochemical parameters determined by ICP-MS to groundwater management of the aquifers of the Llobregat river
- HS117 **LOPEZ-VERA, F.**; GOMEZ-ARTOLA, C.; FERNANDEZ-TURIEL, J.L.; ANTICH, N.; MORELL, I.  
Groundwater mixtures due to pumping in the detrital tertiary aquifer of Madrid
- HS119 **KOMATINA, M.**; KOMATINA, S.  
Karst groundwater management and protection

## **HSC1 Special hydrological symposia**

### **.1 The French National Programme in Hydrology**

Convener: Vauclin, M.  
**Wednesday, 22 April 1998**  
Lecture Room: HERMES  
Chairperson: Ackerer, S.

- 08:45 **VAUCLIN, M.**  
Brief presentation and goals of the French National Programme in Hydrology
- 09:00 **BEVEN, K.**  
On uniqueness of place in hydrological modelling (Solicited Paper)
- 09:30 **AMANI, A.**; GUILLOT, G.; LEBEL, T.; CREUTIN, J.-D.  
Rainfall statistics at small time steps in the Sahel: a preliminary investigation into the validation of a disaggregation model
- 09:45 **CAPPELAERE, B.**; MAIA, A.; PEUGEOT, C.; VIEUX, B.; COLAS, E.  
Compared sensitivity analyses of a fully-distributed and of a semi-distributed hydrological model for a Sahelian watershed
- 10:00 **SAULNIER, G.M.**; DATIN, R.; OBLED, CH.  
Dynamic drainage area and spatially variable precipitation inputs within the TOPMODEL framework
- 10:15 **HABETS, F.**; ARTINIAN, E.; ETCHEVERS, P.; GOLAZ, C.; LACARRERE, P.; LEBLOIS, E.; LEDOUX, E.; MARTIN, E.; NOILHAN, J.; OTTLE, C.; VIDAL MADJAR, D.  
Hydrological study of the Rhone basin
- 10:30 **ETCHEVERS, P.**; HABETS, F.; MARTIN, E.; NOILHAN, J.; ET AL  
Hydrological modelling of Rhone basin
- 10:45 **THIELEN, J.**; CREUTIN, J.D.  
Simulation of convective rainfall over urban area
- 11:00 **BESSEMOULIN, P.**; BRAUD, I.; CALVET, J.C.; HAVERKAMP, R.; KERGOAT, L.; LAURENT, J.P.; MORDELET, P.; NOILHAN, J.; ROUJEAN, J.L.; THONY, J.L.; TOSCA, C.; VIGNES, D.  
MUREX: a long term field programme dedicated to the measurement and modelling of the hydrological balance at a fallow site in south west France
- 11:15 **MORDELET, P.**; TOSCA, C.; VIGNES, D.; KERGOAT, L.; CALVET, J.-C.  
Vegetation dynamics and the water and carbon dioxide fluxes

- 11:30 **BRAUD, I.**; **CHANZY, A.**; BARET, F.; CALVET, J.C.; GONZALEZ, E.; KING, C.; PREVOT, L.; OLIOLO, A.; OTTLE, C.; TACONET, O.; THONY, J.L.; WIGNERON, J.P.  
Assimilation of remote sensing data in SVAT models: description of the Alpilles experiment and first results

11:45 **LUNCH**  
12:00 **Business Meetings**

Chairperson: Beven, K.

- 14:00 **FRANCOIS, C.**; OTTLE, C.; TACONET, O.  
Coupling SVAT model with multispectral radiative transfer models into the Canopy. first results with the alpilles experiment
- 14:15 **VOLTZ, M.**; LENNARTZ, B.; LOUCHART, X.; ANDRIEUX, P.  
Transport of herbicides in runoff water in a farmed Mediterranean catchment
- 14:30 **GERMANN, P.**  
Dissipation of momentum during flow in field soils
- 14:45 **LAURENT, J.P.**; AUZET, A.V.; CHANZY, A.; PEREIRA DOS SANTOS, L.; SANCHEZ-PEREZ, J.M.  
Tests of a new TDR-method to measure soil water content profiles
- 15:00 **AHMADI, A.**; **CHERBLANC, F.**; QUINTARD, M.  
Upscaling dispersion in heterogeneous media: non-equilibrium models
- 15:15 **STOECKEL, M.E.**; POULARD, C.; MOSE, R.; ACKERER, P.  
Transport parameter identification: application of the Sentinel Method
- 15:30 **LABAT, D.**; ABABOU, R.; MANGIN, A.  
Study of non linearities in karstic systems using wavelet transform and multiresolution analysis
- 15:45 **LOUBET, M.**; COUDRAIN-RIBSTEIN, A.; POUYAUD, B.; DUPRE, B.; MARTINEZ, J.  
Origin of salty waters from Bolivian Altiplano: contribution of the SR isotopic data and geochemistry
- 16:00 **COUDRAIN-RIBSTEIN, A.**; PRATX, B.; TALBI, A.; JUSSEMAND, C.  
Is the evaporation from phreatic aquifers in arid zone independent of the soil characteristics?
- 16:15 **MOLENAT, J.**; GRUAU, G.; GASCUEL-ODOUX, C.; DAVY, P.; CURMI, P.; DIA, A.; DURAND, P.; GRIMALDI, C.; MEROT, P.; RIOU, C.  
Combined use of hydrological and hydrochemical data to model the role of the water table in nitrate transfer
- 16:30 **PETELET, E.**; LUCK, J.-M.; BEN OTHMAN, D.; JOSEPH, C.; VASSEUR, G.  
Geochemical contribution to mesoscale water paths: major, trace elements and Sr isotopes applied to the Peyne watershed (Herauld, France)
- 16:45 **OBERLIN, G.**; PNRH TEAMS  
Renewal and development of the hydrological regime representations: concept, variates, models, maps
- 17:00 **END OF SUB-SESSION**

HS

## **HSC1 Special hydrological symposia .1 The French National Programme in Hydrology - Poster Session**

Convener: Vauclin, M.

Display Time: Monday, 09:00 - Friday, 12:00

Authors in Attendance: Wednesday, 17:30 - 19:00

Poster Area: AGORA 2 - HS

Chairperson: Germann, P.F.

- HS121 **FOUCHE-ROGUEZ, S.**; NAJJAR, G.; BRAUD, I.; AMBROISE, B.  
Modelling the surface processes in middle mountain conditions: comparison and sensitivity studies
- HS122 **GONZALEZ-SOSA, E.**; BRAUD, I.; VAUCLIN, M.; BESSEMOULIN, P.  
Modelling the influence of a mulch on the water and energy budget of a fallow land
- HS123 **DUROT, K.**; **OBLED, CH.**; SAULNIER, G.M.; MARTIN, E.  
Coupling of a hydrologic physical based model (TOPMODEL) with a snowmelt routine (SAFRAN-CROCUS) for discharges simulation of a French Alpine catchment
- HS124 **AUZET, A.V.**; **ANDRIEUX, P.**; **ANGULO-JARAMILLO, R.**; **BARIAC, T.**; **BOULEGUE, J.**; **BRESSON, L.-M.**; **DARBOUX, F.**; **ESTEVE, M.**; **KIRKBY, M.J.**; **LE BISSONNAIS, Y.**; **LECOMTE, V.**; **LUDWIG, B.**; **GASCUEL-ODOUX, C.**; **PLANCHON, O.**; **POT, V.**; **RENAUX, B.**  
Dynamic hydrology of the soil surface
- HS125 **ESTEVE, M.**; **PLANCHON, O.**  
Effects of soil microtopography on overland flow and infiltration in cultivated plots
- HS126 **ZAMMIT, C.**; **BOURAOU, F.**; **HAVERKAMP, R.**; **GONZALEZ-SOSA, E.**; **ANGULO JARAMILLO, R.**  
A physically-based approach for estimating water retention curve shape parameter
- HS127 **ORMOND, A.**; **ORTOLEVA, P.**  
The numerical modelling of the instability of infiltration in a rock with heterogeneous texture
- HS128 **COMPERE, F.**; **POREL, G.**; **DELAY, F.**; **RAZACK, M.**  
Transport and retention of clay particles in fine porous medium: experimental and theoretical approach
- HS129 **BEREST, P.**; **HULIN, J.P.**; **RAKOTOMALALA, N.**; **SALIN, D.**  
Experimental and numerical study of miscible fluid displacements in porous media with large heterogeneities
- HS130 **JELLALI, S.**; **COME, J.M.**; **OTT, C.**; **RAZAKARISOA, O.**; **VAN DORPE, F.**; **ZILLIOX, L.**  
Large scale experiment on controlled aquifer pollution by trichlorethylene
- HS131 **SCHÄFER, G.**; **LE THIEZ, P.**; **QUINTARD, M.**; **RAZAKARISOA, O.**  
Numerical simulation of the migration of trichlorethylene in a large scale basin
- HS132 **FAILLAT, J.P.**; **SOMLETTE, L.**  
Variability of nitrate in fissure groundwater and constraint factors (geological, redox, hydrodynamic)

- HS133 **ROULIER, S.**; **ANGULO-JARAMILLO, R.**; **GAUDET, J.P.**; **AUZET, A.V.**; **LADOUCHE, B.**; **BARBIAC, TH.**  
Field measurement of solute transport properties of soil using a tension disc infiltrometer and  $^{18}\text{O}$
- HS134 **BARIAC, T.**; **ROCHE, C.**; **CAYET, S.**; **SURUGUE, M.**  
Isotopic composition of water from terrestrial plants: implications for water sources and water vapor
- HS135 **ROCHE, C.**; **BARIAC, T.**; **BRUNET, Y.**; **BERBIGIER, P.**; **RICHARD, P.**; **BONNEFOND, J.M.**; **BARDOUX, G.**; **LADOUCHE, B.**; **MILLET, A.**  
Monitoring isotopic exchange within a forest stand: relationships between  $\text{H}_2\text{O}$  and  $\text{CO}_2$  isotopic signatures
- HS136 **CAYET, A.**; **BARIAC, T.**; **RICHARD, P.**  
Water uptake by plants in different environmental conditions
- HS137 **LADOUCHE, B.**; **BIRON, PH.**; **NAJJAR, G.**; **MILLET, A.**; **HUON, S.**; **RICHARD, P.**; **BARIAC, T.**  
The contribution of evapotranspiration to the enrichment of  $^{18}\text{O}$  and  $^2\text{H}$  in the water vapor under natural conditions
- HS138 **SANCHEZ-PEREZ, J.M.**; **BARIAC, T.**; **LUCOT, E.**; **AUZET, A.V.**  
Water movement from soil to root investigated through simultaneous measurement: soil water potential, root distribution and hydrological tracers
- HS139 **MADE, B.**; **COUDRAIN-RIBSTEIN, A.**; **SONDAG, F.**; **QUINTANILLA, J.**  
Characterization of waters from Bolivian Altiplano: geochemical modelling approach
- HS140 **PHILIPPE, C.**; **JOUNIAUX, L.**; **POZZI, J.-P.**  
Electrokinetic monitoring of water flow in low consolidated medium
- HS141 **ZAKRI, T.**; **LAURENT, J.P.**  
Comparison of mixing-laws models on soils TDR measurements data
- HS142 **THONY, J.L.**; **MORAT, P.**; **VACHAUD, G.**; **LE MOUEL, J.L.**  
Fields characterization of the relationship between electric field and soil water flux in Vadose zone

## **HSC1 Special hydrological symposia .2 Dryland degradation in the Mediterranean: threat, processes and mitigation**

Convener: Bathurst, J.C.

Co-Convener(s): Quaranta, G.

Thursday, 23 April 1998

Lecture Room: MYKONOS

Chairperson: Bathurst, J.C.

09:00 **SOLARI, P.**; **SICCARDI, F.**

Fires, soil degradation and erosion in small Mediterranean river basins

- 09:15 **VALERO-GARCES, B.**; DELGADO-HUERTAS, A.; NAVAS, A.; MACHIN, J.; KELTS, K.  
Late Holocene climate change and human impact in the semiarid Ebro basin reconstructed from Lacustrine records
- 09:30 **MARTINEZ-MENA, M.**; CASTILLO, V.; ALBALADEJO, J.  
Hydrologic and sediment responses to natural rainfall in a degraded semiarid area of southeast Spain
- 09:45 **RIES, J.B.**; HIRT, U.  
Soil surface sealing on abandoned fields in the semi-arid Mediterranean - a process oriented study on land degradation using thin sections up to large-scale aerial photographs
- 10:00 **CRESCIMANNO, G.**; PROVENZANO, G.  
Hydrological processes affecting land degradation in the Mediterranean environment \*
- 10:15 **DIAZ, E.**; IBANEZ, M.A.; CASTILLO, V.; ALBALADEJO, J.  
Soil rehabilitation with organic amendment: effect on soil structure and moisture content (Poster)
- 10:20 **BREAK**

Chairperson: Quaranta, G.

- 11:00 **KIRKBY, M.J.**; MCMAHON, M.L.  
A dead-zone model for flow over rough hillslopes
- 11:15 **GILABERT, M.A.**; GARCIA-HARO, F.J.; YOUNIS, M.T.; MELIA, J.  
Mixture modelling methods to assess vegetation multitemporal changes in Guadalentin basin (Medalus-III pilot area, SE Spain) (Poster)
- 11:20 **YOUNIS, M.T.**; GILABERT, M.A.; GARCIA-HARO, F.J.; MELIA, J.  
Vegetation multitemporal variation using NDVI from Landsat-TM images in a Medalus-III pilot area (Guadalentin Basin, SE Spain) (Poster)
- 11:25 **MIZARA, A.**  
The use of mixture models in land degradation parameter estimation for surface modelling (Poster)
- 11:30 **QUARANTA, G.**; CASIERI, A.; MAROTTA, G.  
Agro-environmental measures and soil conservation: results in some agricultural Italian areas
- 11:45 **FERRARA, A.**; QUARANTA, G.  
Evaluation, at municipality level, of the effects of different economical issues on the environmental sensitivity of Mediterranean areas by integrated use of ecological and economical data: a methodological proposal
- 12:00 **BATHURST, J.C.**; LENG, X.; MULCAHY, C.; SHEFFIELD, J.  
Decision support system for the Agri basin, Italy
- 12:15 Concluding Remarks
- 12:30 **END OF SUB-SESSION**

**£ 50,- only**

for a personal subscription to  
*Hydrology and Earth System Sciences*

## **HSC1 Special hydrological symposia**

### **.2 Dryland degradation in the Mediterranean: threat, processes and mitigation - Poster Session**

Convener: Bathurst, J.C.

Co-Convener(s): Quaranta, G.

Display Time: Monday, 09:00 - Friday, 12:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: AGORA 2 - HS

- HS143 **DIAZ, E.**; IBANEZ, M.A.; CASTILLO, V.; ALBALADEJO, J.  
Soil rehabilitation with organic amendment: effect on soil structure and moisture content
- HS144 **GILABERT, M.A.**; GARCIA-HARO, F.J.; YOUNIS, M.T.; MELIA, J.  
Mixture modelling methods to assess vegetation multitemporal changes in Guadalentin basin (Medalus-III pilot area, SE Spain)
- HS145 **YOUNIS, M.T.**; GILABERT, M.A.; GARCIA-HARO, F.J.; MELIA, J.  
Vegetation multitemporal variation using NDVI from Landsat-TM images in a Medalus-III pilot area (Guadalentin Basin, SE Spain)
- HS146 **MIZARA, A.**  
The use of mixture models in land degradation parameter estimation for surface modelling

## **HSC1 Special hydrological symposia**

### **.3 Fire: impact on hydrology, sediment yield and ecosystems of Mediterranean lands**

Convener: Moreno, J.M.

Co-Convener(s): Rambal, S.

**Thursday, 23 April 1998**

Lecture Room: MYKONOS

Chairpersons: Moreno, J.M.; Rambal, S.

- 14:00 **PEREZ, B.**; MORENO, J.M.  
Spatial patterns of fuel and heat liberation during fire in a Cytisus shrubland in Sierra de Gredos, Spain
- 14:15 **CRUZ, A.**; ZUAZUA, E.; LUNA, B.; FERNANDEZ, F.; MORENO, J.M.  
Effect of seasonality on fire characteristics and postfire plant dynamics in a Mediterranean shrubland in central Spain
- 14:30 **VIDMA, O.**; MELIA, J.  
Effects of topographic constraints on regeneration processes after fire
- 14:45 **VINE, P.**; PUECH, C.; GRESILLON, J.-M.  
Mapping vegetation regrowth by remote sensing to interpret the hydrological impact of fire
- 15:00 **VIDMA, O.**; FERRAN, A.; DUGUY, B.; VALLEJO, R.; GONZALEZ, J.; MELIA, J.  
Analysis of spectral-biophysical relationships in garrigue ecosystems
- 15:15 **LLOVET, J.**; BAUTISTA, S.; GIOVANARDI, F.; VALLEJO, V.R.  
Sediment production in burned catchments of eastern Spain
- 15:30 **GOMEZ-PLAZA, A.**; CASTILLO, V.M.; ALBALADEJO, J.  
The effects of fire on hydrological response on smiarid Mediterranean small catchments

**HS**

- 15:45 LAVABRE, J.; ARNAUD, P.; FOLTON, N.; MICHEL, C.  
Hydrological response of a little Mediterranean basin flows after fire
- 16:00 MOUILLOT, F.; RAMBAL, S.; RATTE, J.-P.; LAVORAL, S.  
A generic process-based simulation model for fire-prone Mediterranean landscapes
- 16:15 Concluding Remarks
- 16:30 END OF SUB-SESSION

### **HSC1 Special hydrological symposia 4 Sources and transfer of water and sediment in Mediterranean river basins - Poster Session**

Convener: Sala, M.  
Co-Convener(s): Inbar, M.  
Display Time: Monday, 09:00 - Friday, 12:00  
Authors in Attendance: Thursday, 17:00 - 19:00  
Poster Area: AGORA 2 - HS  
Co-sponsored by: IGU Commission on Land Degradation and Desertification

- HS147 MUALEM, Y., ASSOULINE, S.  
Variability of soil properties and its infiltration effect in scaling soil \*
- HS148 INBAR, M.  
Recent man-made changes in the flow regime of the Mediterranean watersheds of Israel
- HS149 GAILLOT, S.; PIEGAY, H.  
Impact of gravel-mining and land-use changes on stream channel and coastal sediment supply. Example of the Calvi Bay in Corsica (France)
- HS150 BATALLA, R.J.; SALA, M.  
Changes on sediment and dissolved load after wildland fire in a Mediterranean river basin
- HS151 LASANTA, T.; GARCIA-RUIZ, J.M.  
Land-uses as different sources of solutes in Mediterranean mountain areas: an example from the central Spanish Pyrenees
- HS152 ORTIGOSA, L.; GARCIA-RUIZ, J.M.  
Soil erosion and rehabilitation after reforestation

### **HSC1 Special hydrological symposia 4 Sources and transfer of water and sediment in Mediterranean river basins**

Convener: Sala, M.  
Co-Convener(s): Inbar, M.  
Friday, 24 April 1998  
Lecture Room: MYKONOS  
Co-sponsored by: IGU Commission on Land Degradation and Desertification  
Chairperson: Batalla, R.J.

- 09:00 SALLES, C.; POESEN, J.  
Drop size distribution from simulated rain measured with an optical spectro pluviometer
- 09:20 MARC, V.; DIDON-LESCOT, J.F.; COUREN, M.; CHABANNA, J.  
Tracing investigation of the hydrological processes in a small Mediterranean forested catchment during an autumn recharge

- 09:40 KONDOLF, M.G.  
Changing sediment budgets in Mediterranean-climate rivers of California, USA
- 10:00 BARTOLINI, C.  
Present versus long term sediment yield to the Adriatic Sea
- 10:20 BREAK

Chairperson: N.N.

- 11:00 LARONNE, J.B.; SEYDELL, I.; ROZIN, U.  
Quantifying the effect of historic land use change on sediment yield in the Ruhama basin, NW Negev, Israel
- 11:20 BATALLA, R.J.; SALA, M.  
Sediment transfer during extreme floods: an example from the Aras torrent, Spain
- 11:40 ANDRIEUX, P.; LOUCHART, X.; VOLTZ, M.  
Effect of agricultural practices on runoff and erosion in vineyard fields in a Mediterranean climate
- 12:00 FITZJOHN, C.; TERNAN, J.L.; PEREZ-GONZALEZ, A.; WILLIAMS, A.G.  
Temporal and spatial continuity of hydrological pathways within a semi-arid gully catchment. The role of soil moisture variability
- 12:20 Concluding Remarks
- 12:40 END OF SUB-SESSION

### **HSC1 Special hydrological symposia 5 Catchment management in the Mediterranean for efficient water use**

Convener: Estrela, T.  
Co-Convener(s): Jamieson, D.  
Tuesday, 21 April 1998  
Lecture Room: GALLIENI 3  
Chairperson: Estrela, T.

- 08:30 LLASAT, M.-C.; SANCHEZ-DIEZMA, R.; SEMPERE TORRES, D.; VIDE, J.P.M.  
Analysis of the rainfall variability based on the EPA and radar data and the runoff effect in a catchment area
- 08:45 VAN WESEMAEL, B.; POESEN, J.; MULLIGAN, M.  
Hydrological changes caused by expansion of almond mono-cultures in the uplands of south east Spain
- 09:00 GARCIA-RUIZ, J.M.; LASANTA, T.  
Improving water resources by means of land management: experiments in mountain areas
- 09:15 SAHUQUILLO, A.; ANDREU, J.; CAPILLA, J.  
Advantages and possibilities for alternative conjunctive use as used in some Spanish basins
- 09:30 ACREMAN, M.; DUNBAR, M.; GUSTARD, A.  
Guidelines for the sustainable management of groundwater fed catchments
- 09:45 MENENDEZ, M.  
An assessment of late flash floods events in Spain
- 10:00 KRINNER, W.; LALLANA, C.; RODRIGUEZ, J.; ESTRELA, T.  
Sustainable water use in Europe
- 10:15 ESTRELA, T.  
Concluding remarks
- 10:30 END OF SUB-SESSION

# Oceans and Atmosphere

## OA1 The thermohaline circulation I

Convener: Colin de Verdiere, A.  
Co-Convener(s): Schott, F.  
**Tuesday, 21 April 1998**  
Lecture Room: CALLIOPE  
Chairperson: Colin de Verdiere, A

### Mid-latitude circulations

- 11:00 **SCHMITT, R.W.**; TOOLE, J.M.; POLZIN, K.L.; LEDWELL, J.R.  
Large-scale patterns of turbulent vertical mixing in the Brazil basin: implications for the Abyssal circulation (Solicited Paper)
- 11:30 **WEATHERLY, G.**; KIM, Y.Y., KONTAR, E.  
The North Atlantic deep water Deep Western Boundary Current in the mid-Brazil basin inferred from moored current meter observations
- 11:45 **BUTZIN, M.**; SÜLTENFUSS, J.; ROETHER, W.  
Tracer studies in the subtropical gyre of the South Atlantic
- 12:00 **OLLITRAULT, M.**  
The AAIW general circulation in the Brazil basin and equatorial Atlantic
- 12:15 **PUTZKA, A.**; ROETHER, W.; **ROSE, H.**  
Tracer studies in the South Atlantic Antarctic intermediate water
- 12:30 **MCCARTNEY, M.S.**; DONOHUE, K.A.  
Mid-basin flow in the subpolar North Atlantic
- 12:45 **BOWER, A.S.**; HUNT, H.D.  
The Gulf Stream - deep western boundary current cross-over: results from float observations
- 13:00 LUNCH

Chairperson: Schott, F.

### Equatorial circulations

- 14:00 **MERCIER, H.**; LUX, M.; ARHAN, M.  
Interhemispheric exchanges of mass in the Atlantic Ocean (Solicited Paper)
- 14:30 **KARSTENSEN, J.**; DENGLER, M.; QUADFASSEL, D.  
The formation of the Indian equatorial water
- 14:45 **ANDRIE, C.**; BOURLES, B.; GOURIOU, Y.; OUDOT, C.; TERNON, J.F.  
Changes of deep circulation in the western equatorial Atlantic inferred from tracer and current measurements (1993-1996)

### Regional studies

- 15:00 **AMBAR, I.**; DIAST, J.; SERRA, N.; GIBBS, M.; DIAZ DEL RIO, G.  
Observations of the Mediterranean undercurrent along the continental slope off Portugal
- 15:15 **JOHANNESSEN, T.**; JANSEN, E.; ANDERSON, L.; WATSON, A.; FALCK, E.; HANSEN, M.; SKJELVAN, I.; MESSIAS, M.; ESOP2 SCIENTIFIC TEAM  
The Greenland Sea experiment

- 15:30 **JOHNS, W.**; MURRAY, S.; SOFIANOS, S.  
Atmospherically-forced exchange through the strait of Bab El Mandeb
- 15:45 **MURRAY, S.P.**; JOHNS, W.  
ADCP-based observations of the seasonal cycle of transport through the Bab El Mandap Strait, 1995-1997
- 16:00 END OF PART I

## OA1 The thermohaline circulation II

Convener: Colin de Verdiere, A.  
Co-Convener(s): Schott, F.  
**Wednesday, 22 April 1998**  
Lecture Room: CALLIOPE  
Chairperson: Schott, F.

### Interdecadal variability

- 09:00 **MCCARTNEY, M.S.**  
The North Atlantic atmosphere - ocean oscillation: observations of the ocean's participation in a slowly varying climate (Solicited Paper)
- 09:30 **KEEN, A.B.**  
The response of the thermohaline circulation in the Hadley Centre coupled model to increasing levels of atmospheric CO<sub>2</sub>
- 09:45 **LOHMANN, G.**; VOSS, R.; MIKOLAJEWICZ, U.  
The freshwater forcing of the thermohaline circulation: analysis of a coupled GCM
- 10:00 **SCHMITTNER, A.**; STOCKER, T.F.  
The stability of the thermohaline circulation in global warming experiments
- 10:15 **HUCK, T.**; VALLIS, G.K.; COLIN DE VERDIERE, A.  
Internal decadal modes of the thermohaline circulation: robustness to high resolution, realistic forcing and topography
- 10:30 **SOKOV, A.V.**; DOBROLIUBOV, S.A.; TERESCHENKOV, V.P.  
Interdecadal variability of the North Atlantic thermohaline structure and circulation: comparison of Russian WOCE-97 and the historical data
- 10:45 **ZAVIALOV, P.**; WAINER, I.; ABSY, J.  
"Global change" at the Brazil-Malvinas confluence: low frequency variability revealed from historical data

### General circulation modelling

- 11:00 **BÖNING, C.**  
Structure and variability of meridional overturning in the Atlantic Ocean: model perspectives (Solicited Paper)
- 11:30 **VALLIS, G.K.**  
Effects of wind and geometry on the thermohaline circulation of an ocean model
- 11:45 LUNCH
- 12:00 Business Meetings

Chairperson: Colin de Verdiere, A

- 14:00 **RAHMSTORF, S.**  
Influence of Mediterranean outflow on the Atlantic thermohaline circulation



- 14:15 **FIEG, K.; GERDES, R.**  
The Atlantic circulation: a sensitivity study using different freshwater fluxes
- 14:30 **WEIJER, W.; DE RUIJTER, W.P.M.; VAN LEEUWEN, P.J.; DIJKSTRA, H.A.**  
The impact of interbasin exchange on the Atlantic overturning circulation
- 14:45 **HERRMANN, P.; JIA, Y.; REYNAUD, T.**  
Formation of North Atlantic deep water in the subpolar gyre - a model intercomparison study
- 15:00 **NOF, D.; VAN GORDER, S.**  
The separation formula and its application to the upper warm layer in the Atlantic Ocean
- 15:15 **SARKISYAN, A.S.; IVANOV, YU.A.; LEBEDEV, K.V.**  
The world ocean thermohaline circulation calculated by new adjustment method
- 15:30 **BEISMANN, J.-O.**  
On the topographic control of the Atlantic Deep Western Boundary Current
- 15:45 **VAN DER SCHRIER, G.; MAAS, L.R.M.**  
Bifurcation analysis of the 2-D thermohaline circulation
- 16:00 **ZALESNY, V.B.; KAZANTSEV, CH.**  
Mathematical modelling of the world ocean thermohaline circulation: solvability, algorithms, results
- 16:15 **HIRSCHI, J.; SANDER, J.; STOCKER, T.F.**  
Intermittent convection and its consequences on the thermohaline circulation in GCM's
- 16:30 **END OF SESSION**

## OA1 The thermohaline circulation - Poster Session

Convener: Colin de Verdiere, A.

Co-Convener(s): Schott, F.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: LES MUSES

- OA001 **GARZOLI, S.L.; RICHARDSON, P.; DUNCOMBE RAE, C.; FRATANTONI, D.; GONI, G.**  
Benguela current experiment (Poster + Video)
- OA002 **RAMIREZ, J.; SANGRA, P.**  
Preliminary Canary current transport measurements from undersea telephone cable
- OA003 **WOELK, S.; ESSELBORN, S.; MEINCKE, J.**  
An inverse box model of the northern North Atlantic
- OA004 **BOCK, J.H.; BOSCH, W.**  
The 1996 sea surface height anomaly of the North Atlantic subpolar gyre
- OA005 **BERSCH, M.; MEINCKE, J.; SY, A.; ESSELBORN, S.; WOELK, S.**  
Interannual thermohaline changes at the eastern margin of the North Atlantic subpolar gyre 1991-1996
- OA006 **ARNOLD, M.; SCHILLER, J.; BAYER, R.; FLEISCHMANN, U.; PUTZKA, A.; SY, A.**  
Transient tracer observations in the North Atlantic
- OA007 **SY, A.; RHEIN, M.**  
Spreading of the "1988 Labrador Sea Water Cascade" across the North Atlantic ocean
- OA008 **STOLLEY, M.; SY, A.**  
Multiyear variability of the upper ocean thermal structure of the North Atlantic current regime
- OA009 **KOLTERMANN, K.P.; STELTER, G.**  
About the seasonality of the LSW arrival west of the Mid-Atlantic-Ridge at 47°N
- OA010 **LORBACHER, K.; KOLTERMANN, K.P.**  
The 48°N Atlantic section: changes in water masses and heat transports during WOCE
- OA011 **KOLTERMANN, K.P.; SOKOV, A.V.; TERECHTCHENKOV, V.P.; DOBROLIUBOV, S.A.; LORBACHER, K.; SY, A.**  
Decadal changes in the thermohaline circulation of the North Atlantic
- OA012 **SEVEROV, D.N.; SEVEROVA, V.A.; BLANCO, M.M.; NAGY, G.J.**  
Identification, characteristics and dynamics of southwestern Atlantic fronts
- OA013 **HOGG, N.G.; MORRIS, M.Y.; OWENS, W.B.**  
Direct measurement of the deep circulation within the Brazil basin
- OA014 **REYNAUD, T.; LEGRAND, P.; MERCIER, H.; BARNIER, B.**  
A new analysis of hydrographic data in the Atlantic and its application to an inverse modelling study
- OA015 **ZAVIALOV, P.; MÖLLER JR, O.**  
Seasonal circulation and associated advective fluxes of heat off southern Brazil and Uruguay: modelling and in situ data
- OA016 **FLEISCHMANN, U.; PUTZKA, A.; BAYER, R.; SY, A.**  
Multi tracer analysis
- OA017 **SIMONSEN, K.; DRANGE, H.**  
Effects of various boundary conditions on the thermohaline circulation and sea ice cover in an isopycnal model for the North Atlantic and the Arctic ocean
- OA018 **JIMENEZ, J.J.; CABOS, W.; ORTIZ BEVIA, M.J.**  
Decadal and interdecadal variability simulated with a regional model
- OA019 **VAN DER SCHRIER, G.; MAAS, L.R.M.**  
Bifurcation analysis of the 3-D thermohaline circulation
- OA020 **KRÖGER, J.; BÖNING, C.W.**  
Pathways of interhemispheric exchange in the equatorial Atlantic: Lagrangian analysis of high resolution models
- OA021 **DE CUEVAS, B.A.**  
Global flux estimates and other results from the OCCAM global ocean model
- OA022 **FIEG, K.; DÖSCHER, R.; GERDES, R.**  
ATOM: model concept and first results
- OA023 **BÖNING, C.; DIETERICH, C.; JIA, Y.; BARNIER, B.**  
Seasonal variability of deep currents in the equatorial Atlantic: results from the DYNAMO project
- OA024 **BERANGER, K.; DE MIRANDA, A.P.; BARNIER, B.**  
The thermohaline circulation in the south Atlantic: estimating the contribution of the major water masses

- OA025 **KNOCHER, H.; BARNIER, B.**  
Simulation of the variability of the meridional overturning cell in the north Atlantic Ocean using a sigma coordinate model
- OA026 **COWARD, A.C.**  
The Mediterranean outflow as described by the OCCAM global ocean model
- OA027 **MARRERO-DOAZ, A.; GORDO, C.; PELEGRO, J.L.; ANTORANZ, A.; RATSIMANDRESY, A.; SANGRA, P.; RAMOREZ, J.J.; CORTHETAS, J.M.; GARCOA-WEIL, L.; PACHECO, M.; HERNANDEZ-GUERRA, A.; RODRIGUEZ-SANTANA, A.**  
Circulation patterns in the Cape Ghir filament area during October 1997
- OA028 **RODRIGUEZ-SANTANA, A.; MARRERO-DOAZ, A.; PELEGRO, J.L.**  
Geostrophic transport as inferred from XBT data through analytic T-S diagrams
- OA029 **WALZ, V.; HILDEBRANDT, H.; CHRISTL, M.; BAYER, R.**  
SF<sub>6</sub> as a transient tracer in oceanography

## OA2 Processes in regions of oceanic time series stations

Convener: Müller, T.J.  
Co-Convener(s): Lukas, R.  
**Thursday, 23 April 1998**  
Lecture Room: CALLIOPE  
Chairperson: Siedler, G.

- 08:30 **BATES, N.R.; JOHNSON, R.J.; CARLSON, C.A.; KNAP, A.H.; MICHAELS, A.F.; STEINBERG, D.K.**  
Interannual ocean variability at the U.S. JGOFS Bermuda Atlantic time-series study (BATS) and Hydrostation S site (Solicited Paper)
- 08:55 **JOYCE, T.M.**  
Decadal variability of subtropical mode water, atmospheric forcing and feedback
- 09:10 **ANTONOV, J.I.; LEVITUS, S.**  
Ocean weather stations time series and climatic changes
- 09:25 **LUKAS, R.; SANTIAGO-MANDUJANO, F.**  
Long-term hydrographic variations observed in the Hawaii ocean time-series (Solicited Paper)
- 09:50 **JEANDEL, C.; RUIZ-PINO, D.; FIALA, M.**  
Present status and future of JGOFS-KERFIX time series station (50°40S - 69°25E)
- 10:05 **RUIZ-PINO, D.; JEANDEL, C.C.; POISSON, A.**  
The ENSO signal and the Antarctic circumpolar wave evidenced by KERFIX times series data
- 10:20 **LOUANCHI, F.; RUIZ-PINO, D.; BRUNET, C.; SCHAUER, B.; POISSON, A.; JEANDEL, C.**  
An overview of oceanic CO<sub>2</sub> variability at JGOFS-KERFIX time series station (50°40S - 69°25E)
- 10:35 **MIQUEL, J.C.; CARROLL, M.; JEANDEL, C.**  
Seasonal trend in particulate carbon flux at the time-series site Kerfix in the southern ocean
- 10:50 **BREAK**

Chairperson: Joyce, T.M.

- 11:10 **SIEDLER, G.; MÜLLER, T.J.**  
The 17-year time series from mooring Kiel 276 in the eastern North Atlantic (Solicited Paper)
- 11:35 **NEUER, S.; DAVENPORT, B.; RATMEYER, V.; FISCHER, G.; WEFER, G.; RUEDA, M.-J.; LLINAS, O.**  
Particle flux measurements at ESTOC
- 11:50 **REPPIN, J.; KNOLL, M.**  
Watermasses and currents in the area of the "ESTOC" time series station
- 12:05 **MERLIVAT, L.**  
High frequency variability of PCO<sub>2</sub> and CO<sub>2</sub> air-sea fluxes at two JGOFS stations: DYFAMED (western Mediterranean Sea) and BATS (subtropical North Atlantic gyre)
- 12:20 **MEMERY, L.; LEVY, M.; MERLIVAT, L.**  
Seasonal variations and high frequency events of the CO<sub>2</sub> partial pressure at the ocean surface: a numerical approach at the DYFAMED station (NW Mediterranean Sea)
- 12:35 **SMITH, N.; LUKAS, R.; HAUGAN, P.**  
A review of ocean climate time series (Solicited Paper)
- 13:00 **MÜLLER, T.J.; LUKAS, R.**  
Concluding remarks
- 13:10 **END OF SESSION**

## OA2 Processes in regions of oceanic time series stations - Poster Session

Convener: Müller, T.J.  
Co-Convener(s): Lukas, R.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: LES MUSES

- OA030 **NILSEN, J.E.O.; OSTERHUS, S.**  
Trends and long time variability of ocean properties at ocean weather station M in the Norwegian Sea
- OA031 **LLINAS, O.; RODRIGUEZ DE LEON, A.; SIEDLER, G.; WEFER, G.**  
European station for time-series in the ocean Canary Islands (1994-1997)
- OA032 **RUEDA, M.J.; SANTANA, R.; PEREZ-MARRERO, J.; CIANCA, A.; VILLAGARCIA, M.G.; GODOY, J.; ESCANEZ, J.; LLINAS, O.**  
Variability of the nutrients concentration at ESTOC (1994-1997)
- OA033 **ARRAES-MESCOFF, R.; TABOADA, J.J.; RUIZ-PINO, D.; ATHIAS, V.; ROY-BARMAN, M.; MIQUEL, J.C.; JEANDEL, C.**  
Geochemistry and modelling of sediment trap time series from the Mediterranean Sea

---

**Attend the Poster Session**

---

OA

### OA3 The North Atlantic Oscillation: decadal variability in ocean and atmosphere I

Convener: Hense, A.

Co-Convener(s): Rahmstorf, S.; Reverdin, G.

Thursday, 23 April 1998

Lecture Room: CALLIOPE

Chairperson: Reverdin, G.

- 14:00 **CURRY, R.; MCCARTNEY, M.S.**  
Interdecadal transport changes along the North Atlantic subpolar/subtropical boundary
- 14:15 **PAETH, H.; HENSE, A.**  
The North Atlantic oscillation in analysis and model data sets
- 14:30 **GULEV, S.; JUNG, T.; RUPRECHT, E.**  
Changes in the intensity of the atmospheric synoptic variability associated with NAO
- 14:45 **SIRVEN, J.**  
About the thermocline ventilation: spin-up and spin-down (Poster)
- 14:50 **FRIEDERICH, P.; HENSE, A.**  
The NAO in a long simulation with a coupled AO-GCM and its interaction with North Atlantic SST
- 15:05 **VISBECK, M.; CULLEN, H.; NAIK, N.**  
Response of North Atlantic ocean model to NAO-like forcing
- 15:20 **PERLWITZ, J.; GRAF, H.-F.**  
The influence of the stratospheric circulation on the time structure of the North-Atlantic-Oscillation (Poster)
- 15:25 **CORTE-REAL, J.A.M.; PINTO, J.G.; DIEGUES, J.P.**  
Relationship between the North Atlantic oscillation and the interannual variability of Atlantic-European climate
- 15:40 **SENNECHAE, N.; FRANKIGNOUL, C.; KESTENARE, E.**  
Wind driven variability of the North Atlantic meridional overturning cell in the ECHAM1/LSG coupled ocean atmosphere model
- 15:55 **VIGNUDELLI, S.; ASTRALDI, M.; GASPARINI, G.P.; LAZZONI, E.; SCHIANO, M.E.**  
Changes in the NW Mediterranean Sea circulation and their possible connection to the North Atlantic Oscillation
- 16:10 **PETERS, D.**  
Decadal change of the large-scale atmospheric circulation over the North Atlantic European region in January of the 80's (Poster)
- 16:15 **MAECHEL, H.; KAPALA, A.**  
Variability of the North Atlantic Oscillation since 1881 (Poster)
- 16:20 **TERESCHENKOV, V.P.; ARKHIPKIN, A.V.**  
Long-term changes of the Mediterranean waters in the north east Atlantic and associated changes of the thermohaline circulation (Poster)
- 16:25 **LOEWE, P.**  
Statistical associations between the NAO, the solar cycle, and the western Baltic Sea season since 1879 (Poster)
- 16:30 END OF PART I

### OA3 The North Atlantic Oscillation: decadal variability in ocean and atmosphere - Poster Session

Convener: Hense, A.

Co-Convener(s): Rahmstorf, S.; Reverdin, G.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: LES MUSES

- OA143 **SIRVEN, J.**  
About the thermocline ventilation: spin-up and spin-down
- OA144 **PERLWITZ, J.; GRAF, H.-F.**  
The influence of the stratospheric circulation on the time structure of the North-Atlantic-Oscillation
- OA145 **PETERS, D.**  
Decadal change of the large-scale atmospheric circulation over the North Atlantic European region in January of the 80's
- OA146 **MAECHEL, H.; KAPALA, A.**  
Variability of the North Atlantic Oscillation since 1881
- OA147 **TERESCHENKOV, V.P.; ARKHIPKIN, A.V.**  
Long-term changes of the Mediterranean waters in the north east Atlantic and associated changes of the thermohaline circulation
- OA148 **LOEWE, P.**  
Statistical associations between the NAO, the solar cycle, and the western Baltic Sea season since 1879
- OA149 **JUNG, T.; RUPRECHT, E.; RIEPE, M.; GULEV, S.**  
On the non-stationarity of the North Atlantic oscillation
- OA150 **DJENIDI, S.; KOSTIANOV, A.G.; SHEREMET, N.A.; EMLOUSSAOUI, A.**  
Thermal variability of the NE Atlantic Ocean
- OA151 **CZAJA, A.; FRANKIGNOUL, C.**  
Decadal buoyancy forcing in a simple model of the subtropical gyre
- OA152 **GIMENO, L.; RUA, A.; CAMPOS, J.F.; NOREGOL, M.**  
Fingerprints of the North Atlantic oscillation in the climate of Galicia (Spain)
- OA153 **GIMENO, L.; RUA, A.; MOURE, J.C.; PEREZ, A.**  
Climate variability in the North Atlantic Ocean using non-codified data
- OA154 **DAMM, P.E.**  
Long-term transport oscillations on the northwest European Shelf calculated from a 39-years numerical circulation model run
- OA155 **DONAHUE, K.A.; MCCARTNEY, M.S.; CURRY, A.G.; MAURITZEN, C.**  
Did the Denmark Strait overflow intensify in 1996-97?
- OA156 **MCCARTNEY, M.S.**  
An oceanic memory of winter conditions: does it feedback to determine the winter NAO state?

### OA3 The North Atlantic Oscillation: decadal variability in ocean and atmosphere II

Convener: Hense, A.

Co-Convener(s): Rahmstorf, S.; Reverdin, G.

Friday, 24 April 1998

Lecture Room: CALLIOPE

Chairperson: Rahmstorf, S.

- 08:30 SELTEN, F.; HAARSMA, R.J.; OPSTEEGH, J.D.  
On the mechanism of North Atlantic decadal variability (Solicited Paper)
- 09:00 KRAHMANN, G.; VISBECK, M.  
Advection of temperature and heat content anomalies in the North Atlantic
- 09:15 TERRAY, L.; BARTHELET, P.  
North Atlantic decadal variability in a 130-year simulation of the current climate with a global coupled GCM
- 09:30 FESER, F.; GRAF, H.-F.; PERLWITZ, J.  
Multidecadal variability of the coupled tropospheric and stratospheric circulation and its connection to the North Atlantic Circulation
- 09:45 KLINGSPORN, M.; METZ, W.  
On the influence of singular modes on the origin of the interdecadal atmospheric variability
- 10:00 JUNG, T.; GULEV, S.  
Timescales of decadal SST-variability in the North Atlantic Ocean
- 10:15 JUNG, T.; RUPRECHT, E.; RIEPE, M.; GULEV, S.  
On the non-stationarity of the North Atlantic oscillation (Poster)
- 10:20 DJENIDI, S.; KOSTIANOV, A.G.; SHEREMET, N.A.; EMLOUSSAOUI, A.  
Thermal variability of the NE Atlantic Ocean (Poster)
- 10:25 BREAK

Chairperson: Opsteegh, J.D.

- 10:45 CHRISTOPH, M.; ULBRICH, U.  
Low-frequency NAO fluctuations in the ECHAM4/OPYC3 coupled AOGCM
- 11:00 SCHMIDT, T.; FRICH, P.; HANSEN, C.  
Variations of sea ice extent in the northern Atlantic on decadal time scale and connection with atmospheric circulation
- 11:15 GREY, S.; HAINES, K.; MYERS, P.G.  
Changes in the upper N. Atlantic hydrography and transports, 1950-1994
- 11:30 WIDMANN, M.; BRETHERTON, C.S.; SCHÄR, C.  
Do changes in the NAO explain trends in Swiss wintertime precipitation?
- 11:45 HAKKINEN, S.; MO, K.C.  
Decadal air-sea interaction in the North Atlantic
- 12:00 SÜNDERMANN, J.  
Decadal variability of the Northwest European Shelf
- 12:15 BLINDHEIM, J.; BOROVKOV, V.; HANSEN, B.; MALMBERG, S.A.A.; TURRELL, W.R.; OSTERHUS, S.  
Effects of the NAO on the structure and distribution of water masses in the Nordic Seas
- 12:30 BRESCH, D.N.; FEHLMANN, R.; DAVIES, H.C.  
Simulations of North Atlantic storm track variability

- 12:45 CZAJA, A.; FRANKIGNOUL, C.  
Decadal buoyancy forcing in a simple model of the subtropical gyre (Poster)
- 12:50 GIMENO, L.; RUA, A.; CAMPOS, J.F.; NOREGOL, M.  
Fingerprints of the North Atlantic oscillation in the climate of Galicia (Spain) (Poster)
- 12:55 GIMENO, L.; RUA, A.; MOURE, J.C.; PEREZ, A.  
Climate variability in the North Atlantic Ocean using non-codified data (Poster)
- 13:00 LUNCH

Chairperson: Sennéchaël, N.

- 14:00 APPENZELLER, C.; STOCKER, T.F.  
The north Atlantic oscillation and its imprint on precipitation and ice accumulation in Greenland (Solicited Paper)
- 14:30 VENZKE, S.; ALLEN, M.R.; SUTTON, R.T.; ROWELL, D.P.; BROWN, S.J.; FOLLAND, C.K.  
Detecting potential atmospheric feedbacks of decadal North Atlantic climate variability in an ensemble of multi-decadal AGCM simulations
- 14:45 LOPEZ, P.; SCHMITH, T.; KAAS, E.  
Sensitivity of the northern hemisphere atmospheric circulation to North Atlantic SSTs in the ARPEGE AGCM
- 15:00 DAMM, P.E.  
Long-term transport oscillations on the northwest European Shelf calculated from a 39-years numerical circulation model run (Poster)
- 15:05 DONAHUE, K.A.; MCCARTNEY, M.S.; CURRY, A.G.; MAURITZEN, C.  
Did the Denmark Strait overflow intensify in 1996-97? (Poster)
- 15:10 MCCARTNEY, M.S.  
An oceanic memory of winter conditions: does it feedback to determine the winter NAO state? (Poster)
- 15:15 PICKART, R.S.  
Coupled variability in the slope water inshore of the Gulf Stream
- 15:30 REVERDIN, G.; VERBRUGGE, N.  
Upper ocean variability related to NAO in the North Atlantic subarctic gyre in recent years
- 15:45 END OF SESSION

### OA4 Circulation variability at mesoscale I

Convener: Millot, C.

Co-Convener(s): Treguier, A.M.

Thursday, 23 April 1998

Lecture Room: URANIE

Chairperson: Koekkoek, H.S.

- 08:30 EDWARDS, N.R.; RICHARDS, K.J.  
Interleaving in the equatorial Pacific
- 08:45 MOLEMAKER, M.J.; SCHMEITS, M.J.; DIJKSTRA, H.A.  
Variability in the wind-driven circulation in the North Atlantic
- 09:00 KOEKKOEK, H.S.  
The interaction between gyre scale and local scale dynamics in the Agulhas region

OA

- 09:15 **IVCHENKO, V.O.; BEST, S.E.; WELLS, N.C.**  
The Agulhas current system: the influence of eddies on the time-mean circulation diagnosed from general circulation models
- 09:30 **IVCHENKO, V.O.**  
The role of transient eddies in the dynamics of the ACC in the Indian sector of the southern ocean
- 09:45 **ARHAN, M.; MERCIER, H.; LUTJEHARMS, J.**  
Description and history of three Agulhas rings intersected by WOCE hydrographic lines A13 and A14
- 10:00 **ROED, L.P.**  
A pointwise energy diagnostic scheme for multilayer, nonisopycnic, primitive equation ocean models
- 10:15 **SHI, X.B.; ROED, L.P.**  
Discrimination of instabilities on the front between the Norwegian Atlantic Current and the Norwegian Coastal Current
- 10:30 **BREAK**
- Chairperson: Treguier, A.M.
- 11:00 **BOWER, A.S.**  
The pathways and kinematics of meddies in the Iberian basin (Solicited Paper)
- 11:30 **BAEY, J.M.; RENOUEARD, D.**  
Instabilities of an intermediate water current
- 11:45 **SADOUX, S.; RENOUEARD, D.; FINCHAM, A.; BAEY, J.M.**  
Laboratory study of the interaction of an underwater current and a cape
- 12:00 **HAUSER, J.; KÄSE, R.H.; RENOUEARD, D.**  
Meddy generation and translation modelled on ocean and tank scales
- 12:15 **DUBUS, L.; SPEER, K.G.; TREGUIER, A.M.**  
Baroclinic instability of a meridional current
- 12:30 **ROBERTS, M.J.; MARSHALL, D.P.**  
Do we require adiabatic dissipation schemes in eddy resolving ocean models?
- 12:45 **MOREL, Y.; MCWILLIAMS, J.**  
Influence of mixing on the stability of oceanic currents
- 13:00 **LUNCH**

Chairperson: Marshall, D.P.

- 14:00 **DEWAR, W.K.; DE MIRANDA, A.P.; BARNIER, B.**  
Eddy-driven barotropic transport control by bottom friction: theoretical and numerical results
- 14:15 **ADCOCK, S.T.; MARSHALL, D.P.**  
Interactions of ocean eddies with bottom topography
- 14:30 **PIERINI, S.; FINCHAM, A.; RENOUEARD, D.; D'AMBROSIO, M.; DIDELLE, H.**  
Laboratory modelling of topographic Rossby modes
- 14:45 **MENKES, C.; MARCHAL, E.; LEBOURGES, A.; BIESSY, B.; MORLIERE, A.; DANDONNEAU, Y.; BALLE, J.; REVERDIN, G.; CHAMPALBERT, G.; FLAMENT, P.; KENNAN, S.**  
From instability waves to tuna in the tropical Atlantic
- 15:00 **THIERRY, V.; MERCIER, H.; TREGUIER, A.M.**  
Direct observations of low frequency fluctuations in the deep equatorial Atlantic

- 15:15 **ZERVAKIS, V.; NITTIS, K.; THEOCHARIS, A.; GEORGOPOULOS, D.**  
The interactive relation of water column structure and mesoscale circulation in the Cretan Sea during the last decade
- 15:30 **O'DWYER, J.; WILLIAMS, R.G.; LACASCE, J.; SPEER, K.**  
Float dispersion and the climatological potential vorticity distribution
- 15:45 **STUTZER, S.**  
Representing the eddy field in a high resolution model of the Irminger Sea
- 16:00 **GASCARD, J.C.**  
Broad band spectrum of mesoscale eddies in the Greenland and Mediterranean seas related to deep water formation
- 16:15 **RUBINO, A.; WOLF, S.; QUADFASEL, D.; SEIN, D.**  
The origin, structure and decay of a subsurface eddy in the Greenland Sea studied by in-situ measurements and numerical modelling
- 16:30 **LEVY, M.; MEMERY, L.; MADEC, G.; VISBECK, M.; NAIK, N.**  
Mesoscale variability of the NW Mediterranean spring bloom: processes and parameterization
- 16:45 **RUIZ, S.; GOMIS, D.; PEDDER, M.A.; FONT, J.; ALLEN, J.T.**  
Multivariate analysis of SeaSoar and ADCP data in the western Alboran Sea: synopticity test and sensitivity to reference level and analysis parameters
- 17:00 **RIXEN, M.; BECKERS, J.-M.**  
Mesoscale analysis in the Alboran Sea: the impact of a relocation procedure to obtain pseudo-synoptic data
- 17:15 **SALAT, J.**  
A dynamic method for horizontal distributions of sea water properties
- 17:30 **END OF PART I**

#### OA4 Circulation variability at mesoscale - Poster Session

Convener: Millot, C.

Co-Convener(s): Treguier, A.M.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:30 - 19:00

Poster Area: LES MUSES

Chairperson: Millot, C.

- OA063 **KÄSE, R.; TYLER, R.**  
The formation and propagation of energetic eddies in equatorial boundary currents
- OA064 **DE MIRANDA, A.P.; BARNIER, B.; DEWAR, W.K.**  
Subduction rates in the south Atlantic using a high resolution numerical model
- OA065 **JIMENEZ, J.J.; CABOS, W.; ORTIZ BEVIA, M.J.**  
Seasonal and interannual simulations of the North Atlantic variability with a regional oceanic model
- OA066 **BOUBNOV, G.G.**  
Short-period variability of the Luderitz upwelling cell

- OA067 SANGRA, P.; GARCOA-WEIL, L.; PACHECO, M.; PELEGRO, J.L.; HERNANDEZ-GUERRA, A.; RATSIMANDRESY, A.W.; RAMOREZ, J.J.; CORTHETAS, J.M.; MARRERO, A.; GRISOLOA, D.; EUGENIO-GONZALEZ, F.  
Drifters observations of a cold filament in the northwest Africa upwelling area
- OA068 FIUZA, A.F.G.; MARTINS, C.S.  
Surface circulation in the northeastern Atlantic region off Iberia
- OA069 JIMENEZ, B.; SANGRA, P.  
A numerical study on Gran Canaria island eddies generation
- OA070 ESTEBAN, M.; RODRIGUEZ, I.; RUIZ DE ELVIRA, A.  
A finite element model for the barotropic vorticity conservation equation: the Canary Islands
- OA071 GINZBURG, A.I.; KOSTIANOV, A.G.; OSTROVSKII, A.G.  
Mesoscale eddies in the Japan Sea
- OA072 GORSKY, G.; TAUPIER-LETAGE, I.; PICHERALL, M.; STEMMANN, L.  
Aggregates distribution in the eastern Algerian basin
- OA073 JÖNSSON, L.; ZODIATIS, G.  
Flow phenomena in the north Aegean Sea derived from satellite data
- OA074 KRIVOSHEYA, V.G.; YAKUBENKO, V.G.; OVCHINNIKOV, L.M.; TITOV, V.B.; SKIRTA, A.YU.  
Mesoscale circulation and variability of hydrophysical fields in the north-eastern part of the Black Sea

#### OA4 Circulation variability at mesoscale II

Convener: Millot, C.  
Co-Convener(s): Treguier, A.M.  
**Friday, 24 April 1998**  
Lecture Room: URANIE  
Chairperson: Font, J.

- 08:30 FIUZA, A.F.G.  
Mesoscale dynamical regimes in the coastal ocean off Iberia
- 08:45 FONT, J.; MILLOT, C.; EMELIANOV, M.; SALAS, J.; RUIZ, S.; PITRAT, D.  
Three-dimensional structure of a coastal mesoscale instability
- 09:00 MILLOT, C.; TAUPIER-LETAGE, I.; FUDA, J.L.  
The Algerian eddies
- 09:15 GERVASIO, L.; MORTIER, L.  
Coastal current instabilities in the presence of topography
- 09:30 ALBEROLA, C.; MILLOT, C.  
Characteristics of the circulation in the Bay of Cassis
- 09:45 GARCIA, M.A.; HERRERA, M.D.; PUIGDEFABREGAS, J.; SANCHEZ-ARCILLA, A.; RIPPETH, T.; SIMPSON, J.; GUILLEN, J.; PALANQUES, A.; PUIG, P.  
Temporal variability of the shelf circulation off the Ebro delta at mesoscale
- 10:00 RAILLARD, O.; DELEVILLE, S.; MORTIER, L.  
Modelling summer marine circulation of the Gulf of Lions: use of an embedded model

- 10:15 ARNOUX-CHIAVASSA, S.; DURAND, N.; DEVENON, J.L.; OUIILON, S.; REY, V.; FORGET, P.; FRAUNIE, P.; NAUDIN, J.J.  
Wind driven dynamics of river plume in the Mediterranean Sea
- 10:30 RUBINO, A.; BRANDT, P.; QUADFASSEL, D.; ALPERS, W.; SELLSCHOPP, J.; FIEKAS, H.-V.  
Evidence for the influence of Atlantic-Ionian stream fluctuations on the tidally induced internal dynamics in the Strait of Messina
- 10:45 END OF SESSION

#### OA5 Open session on coastal/shelf-sea dynamics

Convener: Lehmann, A.  
Co-Convener(s): Shapiro, G.I.  
**Monday, 20 April 1998**  
Lecture Room: URANIE  
Chairperson: Lehmann, A.

- 08:30 TALIPOVA, T.; PELINOVSKY, E.; HOLLOWAY, P.E.  
Numerical simulation of the internal tide evolution on the north-west shelf of Australia
- 08:45 BULGAKOV, S.N.; MARTINEZ, A.Z.; MIKHAILOVA, E.N.; SHAPIRO, N.B.  
Numerical study of the wind-driven circulation in the Mexican Pacific near-shore zone
- 09:00 MURRAY, S.P.; JAROSZ, E.  
Dynamics of the Mississippi-Atchafalaya coastal plume
- 09:15 JACOBS, P.; IVEY, G.N.  
Convection over a continental shelf and slope
- 09:30 SHAPIRO, G.I.; VORONOV, B.F.  
Dynamics of baroclinic mesoscale eddies at the outer shelf
- 09:45 SHAPIRO, G.I.; AKIVIS, T.M.; PYKHOV, N.N.; ANTSEYEROV, S.M.  
Transport of the fine suspended matter on the shelf by mesoscale currents
- 10:00 TARTINVILLE, B.; DELEERSNIJDER, E.; LAZURE, P.; PROCTOR, R.; RUDDICK, K.G.; UITTENBOGAARD, R.E.  
Model intercomparison study for a three-dimensional idealised test case
- 10:15 KÄMPF, J.; FOHRMANN, H.  
Deep water ventilation triggered by turbidity currents: numerical investigations
- 10:30 JOHANNESSEN, B.O.; MCCLIMANS, T.A.  
The relation between coastal sea level and slope currents
- 10:45 BREAK
- Chairperson: Lehmann, A.
- 11:00 MELSOM, A.  
Ocean circulation in Vestfjorden (Oral + Video)
- 11:15 KAUKER, F.; VON STORCH, H.; OBERHUBER, J.M.  
Variability of the North Sea inferred from an isopycnal ocean circulation model
- 11:30 OUAHSINE, A.; SENTCHEV, A.; NGUYEN, K.D.  
Numerical investigations of the effects of topography on the tidal currents circulation

- 11:45 **SMALL, J.**; SCOTT, J.; TALIPOVA, T.; PELINOVSKY, E.  
Observations and modelling of an evolving internal bore during SESAME 1996
- 12:00 **GUIZIEN, K.**; INALL, M.; BARTHELEMY, E.  
3D linear analytical model of internal tide generation on coastal margins
- 12:15 **CHERUBIN, L.**; DRITSCHER, D.G.; MOREL, Y.G.; CARTON, X.J.  
Observation and modelisation of vortex formation in the case of the interaction of the Mediterranean outflow with submarine canyon
- 12:30 **SEIN, D.V.**; ALPERS, W.; BACKHAUS, J.O.; BRANDT, P.; IZQUIERDO, A.; KAGAN, B.A.; RUBINO, A.; TEJEDOR, L.M.  
Numerical simulations of the surface and internal tides in the Strait of Gibraltar
- 12:45 **BRANDT, P.**; RUBINO, A.; ALPERS, W.; HOCK, L.  
Shoaling of internal solitary waves on the Malay shelf in the Andaman Sea
- 13:00 **ZHURBAS, V.M.**; PAKA, V.T.; ANISIMOV, M.V.; GOLENKO, N.N.; SUBBOTINA, M.M.; KOSCHKOSH, G.A.  
The Stolpe Channel overflow in the Baltic Sea: the observations and modelling
- 13:15 LUNCH

Chairperson: Shapiro, G.I.

- 14:00 **CESARINI, C.**; PINARDI, N.  
Effects of the bottom boundary layer on the vertical structure of currents in the northern Adriatic
- 14:15 **HESSNER, K.**; RUBINO, A.; ALPERS, W.  
The Rhine outflow studied by ERS1/2 SAR imagery and numerical simulations
- 14:30 **RODHE, J.**; CEDERLOEF, U.; LILJEBLADH, B.  
Generation of baroclinic tides in the Kattegat - observations and modelling
- 14:45 **JANSSEN, F.**; SCHRUM, C.  
Validating a several years model run by using temperature and salinity data
- 15:00 **DÖÖS, K.**; NYCANDER, J.; COWARD, A.  
Early results from a 3-D primitive equation model applied to the Baltic and the North Sea
- 15:15 **LEHMANN, A.**; MALZ, S.  
On the water and energy balance of the Baltic Sea
- 15:30 **PODEWSKI, S.**; FIEKAS, H.-V.; HERBIG, K.; FEDDERS, B.; WAEBER, W.  
Hydrographic fine-scale variability in the Bornholm basin of the Baltic Sea in winter
- 15:45 **SUURSAAR, Ü.**; ASTOK, V.; OTSMANN, M.; KULLAS, T.  
Exchange processes along the western coast of Estonia: local effects overrun by frontal pulsations
- 16:00 **SALAT, J.**; ABELLO, P.; ARIN, L.; ARNAU, P.A.; CASTELLON, A.; GARCIA, M.A.; GUILLEN, J.; HERRERA, M.D.; JULIA, A.; DE LEON, A.; MASO, M.; OLIVAR, M.P.; PALANQUES, A.; PALOMERA, I.; PUIG, P.; PUIGDEFABREGAS, J.; SABATES, A.; SALAS, J.; SANCHEZ-ARCILLA, A.; SANCHEZ, J.; SCHNEIDER, P.; SOSPEDRA, J.  
Seasonal evolution of water mass structure and shelf-slope exchanges at the Iberian shelf (NW Mediterranean) preliminary results of fans cruises

- 16:15 **LIPS, U.**; LILOVER, M.-J.; HEKANSSON, B.; SUURSAAR  
Hydrography of the gulf of Riga and water exchange properties in the connecting straits, observations 1993-95
- 16:30 **RAUDSEPP, U.**  
A numerical 3D simulation of the annual cycle of the Gulf of Riga thermohaline fields
- 16:45 **KOROTAEV, G.K.**; **SAENKO, O.A.**; **SARKISYAN, A.S.**; **KNYSH, V.V.**  
Assimilation of altimeter data into the Black Sea circulation model
- 17:00 **PICKART, R.S.**  
Structure and dynamics of a meander of the shelfbreak jet in the mid-Atlantic bight
- 17:15 END OF SESSION
- 17:00 Opening
- 19:30 Reception

Video presentation: Tuesday, 17.00-19.00 in the poster area

### OA5 Open session on coastal/shelf-sea dynamics - Poster Session

Convener: Lehmann, A.  
Co-Convener(s): Shapiro, G.I.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: LES MUSES  
Chairpersons: Lehmann, A., Shapiro, G.I.

- OA078 **SKLYAROV, V.E.**; **BEREZUTSKII, A.V.**  
On the influence of internal waves packets on the velocity structure of shelf waters
- OA079 **SEREBRYANY, A.N.**  
Internal waves in coastal waters
- OA080 **ROMANOU, A.**; **WEATHERLY, G.L.**  
Buoyant Ekman layers over variable topography
- OA081 **BULATOV, V.V.**; **VLADIMIROV, Y.V.**  
Far field of internal gravity waves in a stratified ocean of variable depth
- OA082 **BERZINS, V.**; **BETHERS, U.**; **SENNIKOV, J.**  
Internal waves in Gulf of Riga: observations and link with model of vertical TS structure
- OA083 **TALPSEPP, L.**  
On the coherent structure of currents in two straits of the Gulf of Riga
- OA084 **LILOVER, M.-J.**; **LIPS, U.**; **LAANEARU, J.**  
Sub-inertial currents in the Irbe Strait and their contribution to the water exchange
- OA085 **KOUTS, T.**  
Ventilation of upper deep layers of the Baltic Sea
- OA086 **OTSMANN, M.**; **ASTOK, V.**; **KULLAS, T.**; **SUURSAAR, Ü.**  
Integral model for volume transport through the straits of the Gulf of Riga
- OA087 **CEDERLÖF, U.**; **LILJEBLADH, B.**; **RODHE, J.**  
High-resolution observations of currents and hydrography in the Kattegat
- OA088 **ARKHIPKIN, V.S.**; **AMETISTOVA, L.E.**  
Coastal upwelling as indicator of atmospheric processes
- OA089 **ZORAN, M.**  
Black sea coastal zone dynamics by satellite remote sensing data

- OA090 **GORYACHKIN, YU.N.; IVANOV, V.A.; STEPANYANTS, YU.A.**  
Analysis of the Black Sea level oscillations in the different places of the northern part of the coast
- OA091 **GRÖNLUND, L.; KUZNETSOV, L.; DRUZHKOVA, N.**  
Hydrography of the Pechora sea, the southeastern Barents Sea
- OA092 **BARBETSEAS, S.; PAPAGEORGIOU, E.**  
Long term physical variations of waters in a deep basin of the Aegean Sea (Saronikos Gulf, Greece)
- OA093 **GRBEC, B.; DADIC, V.; MOROVIC, M.**  
Surface heat and water fluxes measurements
- OA094 **PAKLAR, G.B.; GRBEC, B.**  
Wind induced currents in the Adriatic Sea
- OA095 **SKLYAROV, V.E.; BEREZUTSKII, A.V.**  
Peculiarities of flow dynamics in the Canary current upwelling
- OA096 **NICOLAS, P.; RATSIVALAKA, C.; MARIETTE, V.; VERBEQUE, V.; PICHON, A.; DEVEAUX, M.**  
An upper layer temperature forecast in the Bay of Biscay
- OA097 **STUTZER, S.; KRAUSS, W.**  
The overflow of Denmark strait overflow water in a numerical model
- OA098 **ROLINSKI, S.**  
Particle transport simulations in coastal areas of the German Bight
- OA099 **VIEZZOLI, D.; MALACIC, V.**  
Tidal dynamics of the northern Adriatic Sea. Comparison of measurements and model results in the Gulf of Trieste
- OA100 **SOUVERMEZOGLOU, E.; KRASAKOPOULOU, E.**  
The effect of water formation on the distribution of oxygen and nutrients in the northern Aegean Sea

## OA6 Dynamics of the polar ocean and its coupling to sea ice I

Convener: Willmott, A.J.  
Co-Convener(s): Lemke, P.  
**Monday, 20 April 1998**  
Lecture Room: CALLIOPE  
Chairperson: Willmott, A.J.

- 08:30 **BIRNBAUM, G.**  
Modelling of atmosphere - sea ice interaction in the region of medium-sized polynyas
- 08:45 **FICHEFET, T.; GOOSSE, H.**  
A numerical investigation of the Ross Sea polynya
- 09:00 **MORALES MAQUEDA, M.A.; WILLMOTT, A.J.**  
A model for the time evolution of a latent heat polynya on the lee side of an island. Application to the St. Lawrence Island polynya
- 09:15 **THOMAS, M.**  
Dynamics and thermodynamics of sea ice leads in the Weddell Sea
- 09:30 **SALAS Y MELIA, D.**  
The regional impact of a lead model on sea ice concentration

- 09:45 **WOLFF, J.-O.; MARSLAND, S.**  
Southern ocean coupled ocean/sea-ice modelling at medium and high resolutions
- 10:00 **GROTEFENDT, K.; BACKHAUS, J.O.**  
The freshwater layer in the Greenland Sea
- 10:15 **WALTER, M.; RHEIN, M.**  
Mechanisms of deep water formation and modification in the Greenland Sea
- 10:30 **BREAK**

Chairperson: Lemke, P.

- 11:00 **KOLTYSHEV, A.; PRIAMIKOV, S.; TIMOKHOV, L.; COLONY, R.; MANLEY, T.; MORISON, J.; TANIS, F.**  
Thermohaline structure and macroscale variability of the Arctic Ocean
- 11:15 **WEHDE, H.; BACKHAUS, J.O.**  
The influence of oceanic convection in carbon distribution
- 11:30 **EIDSVIK, K.J.; UTNES, T.**  
Sediment entrainment into ice via suspended ice crystals
- 11:45 **IKEDA, M.; UKITA, J.**  
A new research initiative for the coupled air-ice-ocean system in the Arctic (Solicited Paper)
- 12:15 **GARRIC, G.; TANSLEY, C.; JAMES, I.N.**  
Dynamics of atmosphere-sea ice interactions at different resolutions in a simple GCM
- 12:30 **LE CLAINCHE, Y.; BRACONNOT, P.; MARTI, O.; JOUSSAUME, S.**  
Coupling processes in high latitudes in the IPSL global coupled model
- 12:45 **RASMUSSEN, E.B.; CHRISTENSEN, J.H.**  
A high resolution simulation of the Greenland sea Gyre with a coupled air-sea-ice regional model
- 13:00 **LUNCH**

Chairperson: Morales Maqueda, M.A.

- 14:00 **PIACSEK, S.; WARN-VARNAS, A.; STARK, D.; MEHRA, A.**  
Sensitivity studies for modelling the GIN and Barents Seas with North Atlantic and Arctic models
- 14:15 **GERDES, R.; KOEBERLE, C.**  
Large scale Atlantic Ocean response to high latitude atmospheric forcing in a coupled ocean-sea ice model
- 14:30 **PIETRZAK, J.; RASMUSSEN, E.; JACOBSEN, J.B.**  
Large scale modelling of the Greenland iceland and Norwegian seas
- 14:45 **WILLMOTT, A.J.; MORALES MAQUEDA, M.A.; DARBY, M.S.**  
Decadal variability in a coupled sea ice-ocean-atmosphere model
- 15:00 **HARDER, M.; LEMKE, P.; HILMER, M.**  
Atmosphere-sea ice-ocean fluxes in SIMIP runs
- 15:15 **STEINER, N.; HARDER, M.; LEMKE, P.; SCHUSTER, S.**  
Comparison of simulated and observed sea ice roughness
- 15:30 **JÜRRENS, R.**  
Annual mean surface fluxes in polar regions simulated with REMO



- 15:45 PARKINSON, C.L.; CAVALLIERI, D.J.; GLOERSEN, P.; ZWALLY, H.J.; COMISO, J.C.  
Arctic Sea ice variability (Solicited Paper)
- 16:15 QIAN, B.; CORTE-REAL, J.; XU, H.  
Preliminary study on variability of arctic sea ice extent
- 16:30 MARTIN, T.; KREYSCHER, M.; KOLATSCHEK, J.  
Validation of a large-scale sea-ice model with SSM/I derived sea-ice drift fields for the Arctic
- 16:45 HILMER, M.; HARDER, M.; LEMKE, P.  
Variability of a 40-year simulation of the Arctic sea ice cover
- 17:00 END OF PART I
- 17:00 Opening
- 19:30 Reception

## OA6 Dynamics of the polar ocean and its coupling to sea ice II

Convener: Willmott, A.J.  
Co-Convener(s): Lemke, P.  
**Tuesday, 21 April 1998**  
Lecture Room: CALLIOPE  
Chairperson: Harder, M.

- 08:30 MARKUS, T.  
A mixed-layer model of the southern ocean forced by satellite-derived ice concentrations
- 08:45 BUKATOV, A.E.; BUKATOV, A.A.  
The broken ice effect on the propagation of surface waves of finite amplitude
- 09:00 RUDELS, B.; SCHAUER, U.; MUENCH, R.D.; GUNN, J.  
The importance of advection, frontal mixing and slope convection for the Arctic Ocean intermediate and deep water characteristics
- 09:15 STEELE, M.; BOYD, T.  
Retreat of the cold halocline layer in the Arctic Ocean
- 09:30 SCHAUER, U.; RUDELS, B.; LOENG, H.; MUENCH, R.; SWIFT, J.  
Modification of waters in the Barents Sea and their input to the Eurasian basin through St. Anna Trough
- 09:45 ANDERSON, L.G.; CHIERICI, M.; FRANSSON, A.; DRANGE, H.; JOHANNESSEN, T.; SKJELVAN, I.  
Annual variability of carbon flux in the upper Greenland Sea, as evaluated from measured data and a box model
- 10:00 KARCHER, M.J.; HARMS, I.H.; SMITH, J.M.  
Using observed and simulated  $^{129}\text{I}$  and  $^{137}\text{Cs}$  distributions for tracing Arctic ocean circulation
- 10:15 MERLIVAT, L.; HOOD, M.  
Time series of  $\text{PCO}_2$ , SST and fluorescence data measured by Carioca buoys drifting in the Greenland Sea between August 1996 and April 1997
- 10:30 END OF SESSION

## Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00, Lecture Room Clio

## OA6 Dynamics of the polar ocean and its coupling to sea ice - Poster Session

Convener: Willmott, A.J.  
Co-Convener(s): Lemke, P.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: LES MUSES

- OA034 WILKINSON, J.; WADHAMS, P.; MELDRUM, D.  
Investigation of small scale ice dynamics within the Odden by the use of a GPS/ARGOS drifter
- OA035 WILKINSON, J.; WADHAMS, P.  
Ice-ocean physics from the March 1997 "Jan Mayen" cruise to the Odden
- OA036 SIMONSEN, K.; DRANGE, H.  
The general circulation, thermodynamics and water mass transformation in the Greenland Sea
- OA037 MUENCH, R.D.; GUNN, J.T.; JOHNSON, E.  
Submarine-based current measurements in the Arctic Ocean: some early results
- OA038 RUDELS, R.; MEYER, R.; IVANOV, V.; QUADFASSEL, D.  
Hydrographic conditions in northern Fram Strait
- OA039 RUDELS, B.; GRÖVALL, H.; HIETALA, R.; LAUNIAINEN, J.  
Characteristics of the Denmark Strait overflow plume in fall 1997
- OA040 SCHAUER, U.; FAHRBACH, E.  
Interannual variability of a dense bottom water plume in the western Barents Sea
- OA041 BUKATOV, A.E.; ZAV'YALOV, D.D.  
Specialities of the flexural-gravity wave propagation through the rupture in the ice field
- OA042 BUKATOV, A.E.; ZHARKOV, V.V.  
Surface waves running onto the bottom's step in the sea with ice cover
- OA043 SÖDERKVIST, J.; BJÖRK, G.  
The climate sensitivity of the Arctic ocean ice cover; some results from a fully coupled atmosphere-ice-ocean column model
- OA044 CONNOLLEY, W.M.; LACHLAN-COPE, T.; MARSHALL, G.J.; LEONARD, S.; TURNER, J.  
Synoptic modelling of winter sea ice in the Bellingshausen Sea
- OA045 HANNA, E.  
Recent variability of Antarctic sea-ice concentration and its physical causes
- OA046 CARRIERES, T.; SAYED, M.  
A comparison of ice drift simulations in the Gulf of St. Lawrence using Lagrangian and Eulerian models
- OA047 GOOSSE, H.; FICHEFET, H.  
Influence of sea-ice-ocean interactions on the ocean general circulation
- OA048 ARKHIPKIN, V.S.; DIORDIEV, K.I.  
Peculiarities of the ice drift in the Arctic Basin
- OA049 NIKIFOROV, S.; DUNAEV, N.  
Coastal geodynamics of Chukchy sea
- OA050 NIKIFOROV, S.; DUNAEV, N.  
Laptev's sea level variability in connection with green house effects
- OA051 TOUDAL, L.; WADHAMS, P.; WILKINSON, J.  
Preconditions for convection in the Greenland Sea

- OA052 **TIMOKHOV, L.; COLONY, R.; KOLTYSHEV, A.**  
Natural cycles and patterns among the upper ocean circulation of the Arctic Ocean, surface wind, and sea ice extent in the Siberian Seas

## OA7 Antarctic ocean circulation: observations and models - Poster Session

Convener: Beckmann, A.

Co-Convener(s): Garcia, M.A.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: LES MUSES

Chairperson: Beckmann, A.

- OA053 **GROSFELD, K.; SCHRÖDER, M.; FAHRBACH, E.; GERDES, R.**  
Changes in the circulation pattern and water mass characteristics of the Filchner trough as a (possible) consequence of iceberg calving
- OA054 **FOLDVIK, A.; GAMMELSROD, T.; NYGAARD, E.; ISTERHUS, S.**  
One-year records of currents, temperature and salinity near the Ronne Ice Shelf, the Weddell Sea
- OA055 **HELLMER, H.H.; BECKMANN, A.**  
The influence of ice shelves on Weddell Sea waters
- OA056 **UOTILA, J.; LAUNIAINEN, J.; VIHMA, T.**  
Response of the Weddell Sea ice pack to wind forcing
- OA057 **BEREZUTSKII, A.V.; SKLYAROV, V.E.**  
Sonar measurements of current velocities in the Antarctic Ocean: results of the PS4 WOCE transect
- OA058 **HARLANDER, U.; GASSMANN, A.**  
Rossby waveguides in polar shear flows with boundaries
- OA059 **UDISTI, R.; BECAGLI, S.; TRAVERSI, R.; VERMIGLI, S.; PICCARDI, G.**  
Fluoride sources and distribution at Northern Victoria Land (Antarctica)
- OA060 **WADHAMS, P.; PARMIGGIANI, F.F.; DE CAROLIS, G.**  
Sea ice properties at the Antarctic winter ice edge from ERS-2 SAR imagery

## OA7 Antarctic ocean circulation: observations and models

Convener: Beckmann, A.

Co-Convener(s): Garcia, M.A.

Friday, 24 April 1998

Lecture Room: URANIE

Chairperson: Beckmann, A.

- 11:00 **MARTINSON, D.**  
Spatial/temporal patterns in Weddell gyre characteristics and their relationship to global climate (Solicited Paper)

- 11:30 **FAHRBACH, E.; HELLMER, H.; MEYER, R.; ROHARDT, G.; SCHROEDER, M.; WOODGATE, R.**  
Gradual warming of the Weddell deep and bottom water
- 11:45 **GARCIA, M.A.**  
Decadal-scale variability of properties of the basin waters of the Bransfield Strait (Antarctica)
- 12:00 **BONEKAMP, H.; STERL, A.; KOMEN, G.J.**  
Interannual variability in the southern ocean associated with the Antarctic circumpolar wave
- 12:15 **CONNOLLEY, W.M.; HARANGOZO, S.A.; KING, J.C.**  
Observations and modelling of large-scale variations in Antarctic sea ice edge
- 12:30 **SEMTNER, A.; ZHANG, Y.**  
Antarctic currents in high-resolution ocean and climate models
- 12:45 **LUNCH**

Chairperson: Garcia, M.A.

- 14:00 **MUENCH, R.D.**  
Deep ocean ventilation through Antarctic intermediate waters: the DOVETAIL Program (Solicited Paper)
- 14:30 **GORDON, A.**  
Western Weddell outflow: thermohaline stratification
- 14:45 **VISBECK, M.**  
Direct velocity measurements related to western Weddell outflow: transports and mixing
- 15:00 **SCHODLOK, M.; HELLMER, H.H.**  
Spreading of water masses formed in the Weddell Sea
- 15:15 **GOMIS, D.; PASCUAL, A.; GARCIA, M.A.; LOPEZ, O.**  
Three-dimensional circulation and mass transport in the western Bransfield Strait (Antarctica) during austral summer
- 15:30 **BREAK**

Chairperson: Hellmer, H.

- 16:00 **GROSFELD, K.; GERDES, R.**  
Ocean circulation in the Filchner-Ronne ice shelf domain from 3D-modelling results
- 16:15 **MAKINSON, K.**  
Tidal residual currents: their contribution to ocean circulation beneath Filchner-Ronne ice shelf
- 16:30 **BECKMANN, A.; HELLMER, H.H.; TIMMERMANN, R.**  
A numerical model of the Weddell Sea: large-scale circulation and water mass distribution
- 16:45 **TIMMERMANN, R.; BECKMANN, A.**  
Seasonal variability of sea ice in a coupled ice-ocean model focussed on the Weddell Sea
- 17:00 **ZHANG, Y.; SEMTNER, A.J.**  
Ocean-ice interaction within the Weddell and Cosmonaut Seas from high-resolution models
- 17:15 **SALAS Y MELIA, D.; THORKILDSEN, F.**  
A global ocean-sea ice coupled model: results for antarctic seas
- 17:30 **NAVEIRA GARABATO, A.C.; STRASS, V.H.; LEACH, H.**  
3D mesoscale circulation at the Antarctic Polar Front - impacts on primary production
- 17:45 **END OF SESSION**

## OA8 The Mediterranean Sea: general circulation variability and related processes

Convener: Pinardi, N.

Co-Convener(s): Send, U.

Tuesday, 21 April 1998

Lecture Room: URANIE

Co-sponsored by: E.U. - MAST Programme

Chairperson: N.N.

- 08:30 **CRISE, A.; CRISPI, G.; SOLIDORO, C.**  
Interannual and seasonal variability of the Mediterranean ecosystem. A numerical study
- 08:45 **ELMOUSSAOUI, A.; BECKERS, J.-M.**  
Isopycnal Mediterranean data analysis and seasonal variability of the outcropping
- 09:00 **NORRO, A.; MARSALEIX, P.; DIAZ, F.; ESTOURNEL, C.**  
Hydrodynamic-biogeochemical 3D coupled model in the Gulf of Lion (France)
- 09:15 **MANCA, B.; KOVACEVIC, V.; SCARAZZATO, P.**  
The two regimes of intermediate/deep flow pattern between the Ionian and Adriatic Sea
- 09:30 **WU, P.; HAINES, K.**  
Modelling the spreading of the Aegean deep water and its effect
- 09:45 **RHEIN, M.**  
Deep and intermediate water circulation in the western Mediterranean
- 10:00 **ARTALE, V.; D'ORTENZIO, F.; IUDICONE, D.; MARCULLO, S.; RUPOLO, V.; SANTOLERI, R.**  
Hydrological characteristics of the LIW in long integrated OGCM experiments
- 10:15 **KIOROGLU, S.; THEOCHARIS, A.**  
Identification, pathways and mixing of intermediate water masses in the eastern Mediterranean during October - November 1991
- 10:30 **BREAK**

Chairperson: N.N.

- 11:00 **BECKERS, J.M.; MEDMEX GROUP**  
Results of the Mediterranean models evaluation experiment (MEDMEX)
- 11:15 **BENKIRAN, M.; DE MEY, P.**  
Comparison of vertical projection schemes applied to data assimilation in the Mediterranean
- 11:30 **BASCHEK, B.; SEND, U.**  
Analysis of flow and transport measurements in the Strait of Gibraltar
- 11:45 **MATTHIEN, S.; HAINES, K.**  
Hydraulic control and overmixing in a Gibraltar-Mediterranean box model
- 12:00 **PIERINI, S.; RUBINO, A.**  
Circulation modelling studies in the Straits of Sicily
- 12:15 **MORTIER, L.; GERVASIO, L.; CREPON, M.**  
High resolution numerical model of Sicily strait: splitting of MAW current into two branches at the strait level
- 12:30 **ONKEN, R.**  
Winter circulation in the Antalya basin
- 12:45 **RIERA, M.; PINT, J.M.; LOPEZ-JURADO, J.L.; GANACHAUD, A.**  
Time flow variability in the Balearic channels and its relevance for the western Mediterranean circulation
- 13:00 **LUNCH**

Chairperson: N.N.

- 14:00 **GIORGETTI, A.; MANCA, B.**  
Interannual variability of the Dense water in the Adriatic Sea for the last 40 years
- 14:15 **MAGGIORE, A.; ZAVATARELLI, M.; PINARDI, N.**  
Modelling the interannual variability of the Adriatic Sea general circulation
- 14:30 **AUCLAIR, F.; MARSALEIX, P.; ESTOURNEL, C.; CASITAS, S.**  
Modelling of the coastal ocean circulation in the north-western Mediterranean Sea: method and results
- 14:45 **MYERS, P.G.; HAINES, K.**  
A flux forced ocean general circulation model of the Mediterranean
- 15:00 **COLAS, F.; CREPON, M.**  
Box models of the Mediterranean Sea and multiple equilibria of the thermohaline circulation
- 15:15 **SANDO, A.B.**  
The general circulation of the Mediterranean Sea using an isopycnal coordinate ocean general circulation model (Poster)
- 15:20 **MARTEL, F.**  
An analysis of the surface circulation internal variability of the Mediterranean Sea in a medmex modelling experiment (Poster)
- 15:25 **ARTALE, V.; CONVERSANO, R.; SANNINO, G.**  
A numerical study of the Gibraltar Strait (Poster)
- 15:30 **FAGGIOLI, D.; MORTIER, L.; CREPON, M.**  
A very high resolution model of the circulation of the Mediterranean Sea (Poster)
- 15:35 **ARTALE, V.; RAGO, V.; IUDICONE, D.; RUPOLO, V.**  
Comparative studies between results from box models and OGCMs applied to the Mediterranean Sea (Poster)
- 15:40 **BRANKART, J.M.; PINARDI, N.**  
Decadal and interannual variability in the Mediterranean Sea: model simulations and observations (Poster)
- 15:45 **DJENIDI, S.; KOSTIANOV, A.G.; LACROIX, G.; SHEREMET, N.A.**  
Comparative analysis of SST interannual variability in the west Mediterranean Sea and north-east Atlantic Ocean (Poster)
- 15:50 **SELLSCHOPP, J.**  
Western Mediterranean type LIW in the Sicilian Channel (Poster)
- 15:55 **BOBANOVIC, J.**  
The response of the Adriatic Sea to an idealised travelling storm (Poster)
- 16:00 **BUONGIORNO-NARDELLI, B.; SALUSTI, E.**  
On dense water formation criteria and their application to the Mediterranean Sea (Poster)
- 16:05 **WARN-VARNAS, A.; PIACSEK, S.; CLIFFORD, M.; HERMAND, J.-P.**  
Studies of the mesoscale field during the 1995 Yellow Shark tomography experiment (Poster)
- 16:10 **CASTELLARI, S.; PINARDI, N.**  
Numerical simulations of the Mediterranean general circulation for the period 1979-1993 (Poster)
- 16:15 **KÄMPER, S.**  
Recent redistribution of helium in the eastern Mediterranean (Poster)

- 16:20 **BADEWIEN, T.; RHEIN, M.**  
Gas transfer parameterization in the western Mediterranean (Poster)
- 16:25 **TOMASIN, A.; PIRAZZOLI, P.A.**  
The seiches of the Adriatic Sea (Poster)
- 16:30 **GUERZONI, S.; ROSSINI, P.**  
Is desert dust a possible atmospheric fertiliser for the Mediterranean ecosystem? (Poster)
- 16:35 **DRAKOPOULOS, P.G.; TSIMPLIS, M.N.**  
Transports in eastern mediterranean during winter 1995 (Poster)
- 16:40 **END OF SESSION**

## **OA8 The Mediterranean Sea: general circulation variability and related processes - Poster Session**

Convener: Pinardi, N.

Co-Convener(s): Send, U.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Tuesday, 17:00 - 19:00**

Poster Area: LES MUSES

Co-sponsored by: E.U. - MAST Programme

- OA101 **SANDO, A.B.**  
The general circulation of the Mediterranean Sea using an isopycnic coordinate ocean general circulation model
- OA102 **MARTEL, F.**  
An analysis of the surface circulation internal variability of the Mediterranean Sea in a medmx modelling experiment
- OA103 **ARTALE, V.; CONVERSANO, R.; SANNINO, G.**  
A numerical study of the Gibraltar Strait
- OA104 **FAGGIOLI, D.; MORTIER, L.; CREPON, M.**  
A very high resolution model of the circulation of the Mediterranean Sea
- OA105 **ARTALE, V.; RAGO, V.; IUDICONE, D.; RUPOLO, V.**  
Comparative studies between results from box models and OGCMs applied to the Mediterranean Sea
- OA106 **BRANKART, J.M.; PINARDI, N.**  
Decadal and interannual variability in the Mediterranean Sea: model simulations and observations
- OA107 **DJENIDI, S.; KOSTIANOY, A.G.; LACROIX, G.; SHEREMET, N.A.**  
Comparative analysis of SST interannual variability in the west Mediterranean Sea and north-east Atlantic Ocean
- OA108 **SELLSCHOPP, J.**  
Western Mediterranean tpe LIW in the Sicilian Channel
- OA109 **BOBANOVIC, J.**  
The response of the Adriatic Sea to an idealised travelling storm
- OA110 **BUONGIORNO-NARDELLI, B.; SALUSTI, E.**  
On dense water formation criteria and their application to the Mediterranean Sea
- OA111 **WARN-VARNAS, A.; PIACSEK, S.; CLIFFORD, M.; HERMAND, J.-P.**  
Studies of the mesoscale field during the 1995 Yellow Shark tomography experiment

- OA112 **CASTELLARI, S.; PINARDI, N.**  
Numerical simulations of the Mediterranean general circulation for the period 1979-1993
- OA113 **KÄMPER, S.**  
Recent redistribution of helium in the eastern Mediterranean
- OA114 **BADEWIEN, T.; RHEIN, M.**  
Gas transfer parameterization in the western Mediterranean
- OA115 **TOMASIN, A.; PIRAZZOLI, P.A.**  
The seiches of the Adriatic Sea
- OA116 **GUERZONI, S.; ROSSINI, P.**  
Is desert dust a possible atmospheric fertiliser for the Mediterranean ecosystem?
- OA117 **DRAKOPOULOS, P.G.; TSIMPLIS, M.N.**  
Transports in eastern mediterranean during winter 1995

## **OA9 Basic turbulence studies - Poster Session**

Convener: Petrosyan, A.

Co-Convener(s): Gerz, T.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: LES MUSES

Chairperson: Petrosyan, A.

- OA217 **VILORIA, R.E.; TRICIO, V.; RODRIGUEZ, L.R.; GONZALEZ, M.I.; SERNA, A.**  
Study of the atmospheric stability by using a 9 m meteorological mast
- OA218 **BATCHVAROVA, E.; GRYNING, S.-E.**  
Atmospheric turbulence and internal boundary layer development in Athens during the MEDCAPHOT-TRACE experiment
- OA219 **MIX, W.; ZIEMANN, A.; GOLDBERG, V.; BERNHARDT, K.**  
Simulation of meteorological quantities in plant stands
- OA220 **INFANTE, C.; SOLER, M.R.; CONANGLA, L.**  
Surface fluxes variability and his influence on the development of the planetary boundary layer
- OA221 **CONANGLA, L.; VILA, J.; SOLER, M.R.**  
Stable boundary layer height derived from measurements and a planetary boundary layer model
- OA222 **BUENESTADO, P.; SOLER, M.R.**  
Vertical variation in turbulent statistics
- OA223 **DESSENS, J.; BENECH, B.; CAMPISTRON, B.; JACOBY, S.; DUPONT, E.; CARISSIMO, B.**  
UHF validation campaign using rawinsoundings, sodar, anemometers and disdrometer
- OA224 **KHVEDELIDZE, Z.; BIBILASHVILI, T.; DANELIA, R.**  
Calculation of the turbulent heat flow by means of the gradient method for the mountain terrain
- OA225 **GURGENIDZE, M.; BIBILASHVILI, T.; KHVEDELIDZE, Z.**  
Mathematical model of the turbulent flow of the polluted air with the due regard of the relief of Republic of Georgia

OA

## OA9 Basic turbulence studies

Convener: Petrosyan, A.  
Co-Convener(s): Gerz, T.  
**Friday, 24 April 1998**  
Lecture Room: ERATO  
Chairperson: Petrosyan, A.

- 08:30 **ZILITINKEVICH, S.; GRYANIK, V.M.; LYKOSOV, V.N.; MIRONOV, D.V.**  
A new concept of the 3rd order transport and non-local turbulence closures for convective boundary layers (CBLs) (Solicited Paper)
- 09:00 **ANFOSSI, D.; DEGRAZIA, G.; FERRERO, E.; GRYNING, S.E.; MORSELLI, M.G.; TRINI CASTELLI, S.**  
Experimental evaluation of Kolmogorov constant  $C_0$  in the atmospheric surface layer
- 09:15 **CHALLINOR, A.J.; MOBBS, S.D.; GARDINER, B.A.**  
First-order closure numerical modelling of the atmospheric boundary layer in and above a forest canopy
- 09:30 **MODZELEWSKI, H.**  
A prognostic parameterization of the transient turbulence matrix for non-local closure
- 09:45 **MASSON, V.; BOUGEAULT, P.**  
A new way to parameterize turbulence over high mountains
- 10:00 **DROBINSKI, P.; BROWN, R.A.; FLAMANT, P.H.; PELON, J.**  
Modulation of surface fluxes by organized large eddies
- 10:15 **BREAK**

Chairperson: Bergmann, J.C.

- 11:00 **HAUSCHILD, A.; SPITZER, H.-J.**  
Problems of and approaches to scale separation using the example of advection
- 11:15 **DURAND, P.; THOUMIEUX, F.; LAMBERT, D.**  
Turbulent length scales in the marine atmospheric mixed layer
- 11:30 **ZILITINKEVICH, S.; JOHANSSON, P.-E.; BAKLANOV, A.; MIRONOV, D.V.**  
A prognostic equation for the depth of evolving stably stratified atmospheric planetary boundary layers
- 11:45 **DAVES, B.; TAMPIERI, F.; TUBINO, M.; ZARDI, D.**  
Exchange processes in a valley system: the effects of local circulation
- 12:00 **FERRARI, A.; TAMPIERI, F.; ZARDI, D.**  
Convection and thermal structure in an alpine valley
- 12:15 **PAVLOV, S.; PETROSYAN, A.**  
The cloudy boundary layer flows visualisation
- 12:30 **ATHANASSIADOU, M.; CASTRO, I.P.**  
Wind - tunnel experiments of neutral flow over series of rough hills
- 12:45 **BLUMEN, W.; GROSSMAN, R.L.**  
Physical processes in the atmosphere near the surface at night
- 13:00 **LUNCH**

Chairperson: Petrosyan, A.

- 14:00 **LARSEN, S.; ZILITINKEVICH, S.**  
Surface fluxes in climate system. A new EU Project "SFINCS" (the years 1998-2000) (Solicited Paper)\*
- 14:30 **CASADIO, S.; RAO, M.P.; CACCIANI, M.; CALISSE, P.G.; CASTRACANE, P.; FIOCCO, G.**  
Measurement of atmospheric water vapor flux in the nocturnal urban boundary layer
- 14:45 **JACOBY, S.; BENECH, B.; CAMPISTRON, B.; DESSEN, J.; DUPONT, E.; CARISSIMO, B.**  
Analysis of turbulence measurements in the atmospheric boundary layer by UHF profiler, sodar and sonic anemometer
- 15:00 **BERGMANN, J.C.**  
Momentum balance-determined height of neutral and stable idealised PBL - applied to Cabauw and Leipzig data
- 15:15 **TOZZA, J.-R.; HANUISE, C.; GRESILLON, D.**  
Characterization of atmospheric turbulence by the collective wave scattering approach
- 15:30 **ZIEMANN, A.; ARNOLD, K.; RAABE, A.**  
Theoretical study of acoustic tomography inside the atmospheric boundary layer
- 15:45 **ARNOLD, K.; ZIEMANN, A.; RAABE, A.**  
Experimental method of acoustic tomography of the atmospheric surface layer
- 16:00 **CALANCA, P.; FORRER, J.; ROTACH, M.**  
The stably stratified boundary layer over the Greenland ice sheet
- 16:15 Meeting of participants of SFINCS Project
- 16:30 **END OF SESSION**

## OA10 Fluxes over terrestrial surfaces .1 Surface fluxes in non-homogeneous terrain

Convener: Foken, Th.  
**Wednesday, 22 April 1998**  
Lecture Room: THALIE  
Chairperson: Jensen, N.O.

### Methodological studies I

- 09:00 **PANIN, G.N.; TETZLAFF, G.; RAABE, A.**  
Turbulent simulation of the air flux above inhomogeneous surfaces
- 09:15 **HORST, T.W.**  
The fetch requirements for profile and Bowen-ratio measurements of scalar fluxes
- 09:30 **SCHMID, H.P.**  
Scaling up of measured fluxes from a vegetation stand to the ecosystem scale: a footprint based methodology
- 09:45 **FRIBORG, T.; SOEGAARD, H.; NORSTROEM, C.; HANSEN, B.U.; CHRISTENSEN, T.R.**  
Scaling of  $\text{CO}_2$  and  $\text{CH}_4$  fluxes from chambers to landscape scale
- 10:00 **JENSEN, N.O.; HASAGER, C.B.**  
On scalar surface flux aggregation in heterogeneous landscapes
- 10:15 **BREAK**

Chairperson: Schmid, H.P.

### Methodological studies II

- 10:45 **FRIEDRICH, K.**; MÖLDERS, N.  
A numerical case study on the sensitivity of the water and energy fluxes to the heterogeneity of the distribution of land use
- 11:00 **ISSLER, S.A.**; ROTACH, M.W.; SCHMID, H.P.  
Large eddy simulation in neutral stratification over inhomogeneous vegetation canopy
- 11:15 **IRITZ, Z.**; LINDROTH, A.  
Evaluation of the time-step effect on model results by using the modified Shuttleworth-Wallace evaporation model
- 11:30 **PANIN, G.N.**; NASONOV, A.E.; FOKEN, TH.  
Model of the energy-mass exchange in a coastal zone
- 11:45 **WEIDINGER, T.**; MATYASOVSKY, I.  
Estimating turbulent fluxes using an optimal averaging method
- 12:00 LUNCH
- 12:00 Business Meetings

Chairperson: Horst, T.W.

### Experimental studies I

- 14:00 **DI SABATINO, S.**; TAMPIERI, F.; TROMBETTI, F.  
The growth of the internal boundary layer in different stability conditions
- 14:15 **JEGEDE, O.O.**; **FOKEN, TH.**  
Influence of roughness change on the profiles of mean wind and momentum flux observed in the neutral surface layer
- 14:30 **KUKHARTES, V.P.**; TSVANG, L.R.; RICHTER, S.H.; WEISENSEE, U.; **FOKEN, TH.**  
Variation of the surface temperature and the closure of the energy balance of the surface layer
- 14:45 **GROSSMAN, R.L.**; LEMONE, M.A.; BLUMEN, W.  
Effect of soil moisture on the diurnal variability of the atmospheric boundary layer
- 15:00 **PHERSSON, M.**; LINDROTH, A.  
Effects of soil moisture dynamics on transpiration in a mixed coniferous forest in central Sweden

Chairperson: Panin, G.N.

### Experimental studies II

- 15:15 **HOBBS, S.E.**; DYER, D.J.  
Surface flux observations using remotely piloted aircraft - initial results
- 15:30 **STRUNIN, M.A.**; **FOKEN, TH.**  
Influence of non-homogeneity of underlying surface on the structure of turbulence in the atmospheric boundary layer
- 15:45 **SCHUEPP, P.H.**; OGUNJEMIYO, S.O.; KAHARABATA, S.; DESJARDINS, R.L.; MACPHERSON, J.I.  
Low-level airborne flux observations over heterogeneous terrain in BOREAS

- 16:00 **VON HÜNERBEIN, S.**; GASSNER, M.; RICHNER, H.  
Surface heatflux extrapolated from sodar-derived heatflux profiles
- 16:15 **LAUBACH, J.**; MCNAUGHTON, K.G.  
Unequal eddy diffusivities of heat and water vapour at the base of an advective inversion

Chairperson: Foken, Th.

### Special studies

- 16:30 **POGGIO, L.**; FURGER, M.; GRABER, W.K.; PREVOT, A.  
Scidar/DOAS measurements during the VOTALP valley experiment
- 16:45 **TAGLIAZUCCA, M.**; GIOSTRA, U.; CAVA, D.  
Spectral analysis of topographic forcings in a stable boundary layer
- 17:00 END OF SUB-SESSION

## **OA10 Fluxes over terrestrial surfaces**

### **.1 Surface fluxes in non-homogeneous terrain - Poster Session**

Convener: Foken, Th.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: LES MUSES

Chairperson: Foken, Th.

- OA226 **WEBER, R.O.**  
Remarks on the definition of friction velocity
- OA227 **INFANTE, C.**; **SOLER, M.R.**  
Land surface parameterization model. Comparison with measurements
- OA228 **LUND, M.R.**  
Modelling the partitioning of the evaporation from a heterogeneous millet crop in Burkina Faso
- OA229 **RAABE, A.**; TETZLAFF, G.; PANIN, G.N.  
Underestimation of turbulent fluxes and the degree of inhomogeneity of the land surface around the experimental site
- OA230 **ZIEMANN, A.**; **ARNOLD, K.**; **RAABE, A.**  
An experimental method for characterisation of non-ideal measuring sites
- OA231 **SIEGRIST, F.**  
Vertical flux profiles and problems of energy balance closure within the planetary boundary layer derived from eddy correlation measurements and tethered balloon soundings
- OA232 **BEYRICH, F.**; **NEISSER, J.**; **QUANTE, M.**; **WODE, CH.**  
Fluxes over heterogeneous land surfaces - the LITFASS-1998 experiment
- OA233 **ALADOS-ARBOLEDAS, L.**; **OLMO, F.J.**  
Sensible heat flux and radiometric surface temperature over sparse vegetation in a semiarid region
- OA234 **HURTALOVA, T.**  
Parametrization of local advection influence on water transport
- OA235 **KOWALSKI, A.S.**; **VONG, R.J.**  
Vertical evolution of turbulent cloudwater fluxes above forest

OA

- OA236 **MARTANO, P.**; MATINO, M.  
Vertical fluxes balance in coastal sites
- OA237 **CARDOSO, R.M.A.P.**; MIRANDA, P.M.A.  
Momentum fluxes due to sub-grib scale orographic effects
- OA238 **BLYTH, E.**; HUNTINGFORD, C.  
Estimating potential evaporation over a hill
- OA239 **DRUILHET, A.**; SAID, F.  
Surface fluxes, turbulent moments and characteristic scales of a tropical forest, a tropical savannah and a Sahelian savannah in Africa
- OA240 **LEVY, P.E.**; GRELLE, A.; LINDROTH, A.; MOLDER, M.; JARVIS, P.G.; KRUIJT, B.; MONCRIEFF, J.B.  
Regional-scale CO<sub>2</sub> fluxes over central Sweden by a boundary layer budget method
- OA241 **FINKELE, K.**; KATZFEY, J.J.; KOWALCZYK, E.A.; MCGREGOR, J.L.; RAUPACH, M.R.  
Regional energy flux measurements and modelling along a rainfall gradient in Australia
- OA242 **PANFYOROV, O.**; KROEGER, M.; SCHNITZLER, K.-G.; GRAVENHORST, G.  
Influence of vegetation cover heterogeneity on the spectral composition of up- and downward directed radiative fluxes
- OA243 **PAPAIOANNOU, G.**; GIANNOPOULOS, P.; RETALIS, D.; ASIMOKOPOULOS, D.  
Atmospheric radiation parameterizations
- OA244 **GOTTIKH, R.P.**; LAUBENBAKH, E.; MELTCHOUK, B.; SHABALIN, N.YA.; BOROVSKY, M.YA.  
Combine atmo-radiogeochemical survey and monitoring of manifestations of endogeneous processes

## **OA10 Fluxes over terrestrial surfaces .2 Long term measurements of surface fluxes**

Convener: Valentini, R.

**Thursday, 23 April 1998**

Lecture Room: THALIE

Co-sponsored by: IGBP-BAHC, EUROFLUX EC Project

Chairperson: Schmid, H.-P.

- 09:00 **AURELA, M.**; LAURILA, T.; TUOVINEN, J.-P.  
Measured and modelled CO<sub>2</sub> balances in a wetland ecosystem in northern Finland
- 09:15 **CALVET, J.-C.**; NOILHAN, J.; ROUJEAN, J.-L.  
Introducing CO<sub>2</sub> assimilation in ISBA for interactive vegetation
- 09:30 **NORSTROM, C.**; FRIBORG, T.; HANSEN, B.U.; SOEGAARD, H.  
Measurements of CO<sub>2</sub>, CH<sub>4</sub>, sensible and latent heat exchange at different tundra surfaces in a high Arctic environment
- 09:45 **MARTIN, P.H.**; LONGDOZ, B.; AUBINET, M.; SALTELLI, A.; FRANCOIS, L.  
Comparing, refining, and standardizing water, CO<sub>2</sub> and heat exchange modelling methodologies
- 10:00 **HUMMELSHOEJ, P.**; JENSEN, N.O.; PILEGAARD, K.  
CO<sub>2</sub> and water vapour fluxes over a Danish beech forest

- 10:15 **SCHMID, H.P.**; BATHELMIE, B.; CURTIS, P.; GRIMMOND, S.; PRYOR, S.; TEERI, J.  
CO<sub>2</sub> exchange in mixed hardwood forests in the midwestern United States: two AmeriFlux projects
- 10:30 **BREAK**  
Session continues 14.00 in room ERATO

Lecture Room: ERATO

Chairperson: Betts, A.

- 14:00 **FRÜHAUF, C.**; BERNHOFER, CH.; VOGEL, M.; ROTHE, M.  
Components of forest evapotranspiration determined by micrometeorological and plant physiological methods
- 14:15 **VANDENHAUTE, M.**; AUBINET, M.; CHERMANNE, B.; LONGDOZ, B.; LAITAT, E.  
Long term measurement of fluxes in a mixed Ardennes forest: 1. Inference of functional relationships
- 14:30 **AUBINET, M.**; VANDENHAUTE, M.; CHERMANNNE, B.; LONGDOZ, B.; LAITAT, E.  
Long term measurement of fluxes in a mixed Ardennes forest: 2. Impact of measurement errors on the estimation of the carbon sink magnitude
- 14:45 **VESALA, T.**; RANNIK, Ü.; LAAKSO, L.; PUMPANEN, J.; ILVESNIEMI, H.; SALKINOJA-SALONEN, M.; WITTMAN, C.  
Soil perspiration in cold climate for a Scots pine stand
- 15:00 **MARKKANEN, T.**; VESALA, T.; PALVA, L.; GARAM, E.; PALMROTH, S.; HARI, P.  
Scaling of Scots pine shoot photosynthesis to canopy by high-resolution irradiance measurements
- 15:15 **SCHMID, H.P.**; HOLLINGER, D.; WOFSY, S.  
AmeriFlux - the carbon flux network of the Americas: an overview of objectives and goals
- 15:30 **MARTY, CH.**; PHILIPONA, R.; FROEHLICH, C.; OHMURA, A.  
Monitoring of longwave radiation in the Swiss Alps
- 15:45 **POCCARD, I.**; RICHARD, Y.  
A statistical study of NDVI sensitivity to seasonal and interannual rainfall variation in Southern Africa
- 16:00 **LONGDOZ, B.**; AUBINET, M.; MARTIN, P.H.; FRANCOIS, L.M.  
Calibration and validation of the WATCH-IT model
- 16:15 **SPINDLER, G.**; BRÜGGEMANN, E.; TEICHMANN, U.; THEISS, D.  
Long term study of wet and dry deposition of sulphur at a rural site in eastern Germany
- 16:30 **END OF SESSION**

## **OA10 Fluxes over terrestrial surfaces .2 Long term measurements of surface fluxes**

Convener: Valentini, R.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: LES MUSES

Co-sponsored by: IGBP-BAHC, EUROFLUX EC Project

- OA246 **GARCIA, R.L.**; DEMETRIADES-SHAH, T.H.; WELLES, J.M.; MCDERMITT, D.K.  
Measurement of soil CO<sub>2</sub> flux

- OA247 **BERBIGIER, P.; OGE, J.; BONNEFOND, J.M.; LAMAUD, E.; BRUNET, Y.**  
Mass and energy fluxes over a pine forest canopy: energy and water balance closure, and intra-annual variations in water and radiation use efficiencies
- OA248 **RANA, G.; MAGLIULO, V.**  
A simplified aerodynamic method to measure ammonia flux over field crops under Mediterranean climate
- OA249 **MENDONCA LEITE, S.; AMORIM, V.**  
A comparative approach to surface fluxes variation in the soil/atmosphere interface
- OA250 **VOLKOV, YU.A.; FLAKHINA, I.N.**  
Variations of radiative fluxes in ARM-experiment in connection with cloudiness (measurement and modelling)
- OA251 **PHILIPONA, R.; MARTY, CH.; FROHLICH, C.; OHMURA, A.**  
Absolute measurements of night sky downwelling longwave radiation
- OA252 **KOLLE, O.**  
Six years of surface energy and water balance measurements at a site with agricultural land use
- OA253 **REBMANN, C.; SCHULZE, E.-D.; TENHUNEN, J.**  
Determination of turbulent fluxes of carbon dioxide and water vapour in different measuring heights above Spruce forest in south-east Germany
- OA254 **KOWALSKI, A.S.; CEULEMANS, R.; AUBINET, M.**  
Sensitivity of eddy correlation fluxes to the method of flux computation
- OA255 **KOWALSKI, A.S.; CEULEMANS, R.**  
Eddy correlation fluxes of carbon dioxide and water vapour above a mixed forest canopy in the Belgian Campine region
- OA256 **POLONIO, D.; SOLER, M.R.**  
Monthly variability of energy and matter fluxes over agricultural canopies. The influence of mesoscale and microscale processes
- OA257 **TUOVINEN, J.-P.; AURELA, M.; LAURILA, T.**  
Ozone deposition to a Scots pine and a mountain birch forest in northern Europe
- OA258 **HEIDENREICH, W.; WOLFF, G.; STÜDEMANN, O.; ECKERT, S.**  
Comparison of Trichloroacetic Acid (TCA) concentrations of two spruce sites in the Rostocker Heide, NE Germany
- OA259 **NORDSTROM, C.; FRIBORG, T.; HANSEN, B.U.; SOEGAARD, H.**  
Atmospheric fluxes of CO<sub>2</sub> above a high Arctic fen from spring to autumn two successive years in NE-Greenland
- OA260 **KING, J.C.; ANDERSON, P.S.**  
Long-term monitoring of surface fluxes at Halley Research Station, Antarctica
- OA261 **BETTS, A.K.; GOULDEN, M.; WOFISKY, S.**  
Controls on evaporation in a boreal spruce forest

## OA11 Mesoscale transport of air pollution, including land/sea areas

Convener: Mikkelsen, T.  
Co-Convener(s): Artinano, B.  
Tuesday, 21 April 1998  
Lecture Room: ERATO  
Chairperson: Mikkelsen, T.

- 11:00 **SORENSEN, J.H.; RASMUSSEN, A.; ELLERMANN, T.; LYCK, E.**  
Evidence for mesoscale influence on long-range dispersion (Solicited Paper)
- 11:30 **LENZ, C.-J.; SCHLÜNZEN, K.H.; SCHATZMANN, M.; MAJEWSKI, D.**  
Calculation of meteorological data with atmospheric models of different horizontal resolution
- 11:45 **BASTRUP-BIRK, A.; BRANDT, J.; MIKKELSEN, T.; THYKIER-NIELSEN, S.; ZLATEV, Z.**  
Testing meteorological fields and PBL parameterizations for modelling transport, dispersion, and deposition - validation against ETEX-1, ETEX-2, and Chernobyl
- 12:00 **CESARI, R.; VOGEL, B.; FIEDLER, F.**  
The influence of subgrid scale mixing on the trace gas distribution in a numerical weather prediction model
- 12:15 **GIORDANI, H.; PLANTON, S.; CANIAUX, G.**  
Ageostrophic circulations over the Azores oceanic front during the SEMAPHORE experiment
- 12:30 **SOARES, P.M.M.; MIRANDA, P.M.A.; BARROSO, C.S.F.**  
The sea breeze in the south of Portugal: observations and numerical results
- 12:45 **CHOMETTE, O.; LEGRAND, M.; CAUTENET, G.; PRADELLE, F.**  
A mesoscale study of a desert plume over west Africa and eastern Atlantic. Part 1: radiative impact
- 13:00 LUNCH
- Chairperson: Brandt, J., Sorensen, J.H.
- 14:00 **CAUTENET, G.; PRADELLE, F.; CHOMETTE, O.; LEGRAND, M.**  
A mesoscale study of a desert plume over west Africa and eastern Atlantic. Part 2: Dynamical and microphysical features
- 14:15 **POULET, D.; CAUTENET, S.**  
Redistribution of chemical species in equatorial Africa during biomass burning events
- 14:30 **RENNER, E.; GÖLDNER, R.; MÜNZENBERG-ST. DENIS, A.; SCHRÖDER, W.**  
Modelling of SO<sub>2</sub>-transport over highly complex terrain with METRAS
- 14:45 **SCHUEPBACH, E.; LIEBERMANN, S.S.; LEHMANN, D.; MONKS, P.S.; ZANIS, P.; PENKETT, S.A.; SCHNEITER, D.; BUCHMANN, B.**  
A case study with meso-scale transport of ozone to the Alpine site at Jungfraujoch during FREETEX'96
- 15:00 **WOTAWA, G.; KROEGER, H.; SEIBERT, P.**  
Transport of ozone and precursors towards the Alps - results of a two-yr model study
- 15:15 **TROUDE, F.; DUPONT, E.; CARISSIMO, B.; FLOSSMANN, A.I.**  
3D mesoscale simulation over Paris agglomeration

OA

\* not included in the Book of Abstracts



- 15:30 **TULET, P.; ROSSET, R.; CRASSIER, V.**  
A case of photooxidant plume modelling over Paris area
- 15:45 **TIPPKE, J.; MEMMESHEIMER, M.; JAKOBS, H.J.; EBEL, A.; GRAFF, A.; MOTZ, G.B.; HARTMANN, A.**  
Emission reduction scenarios on different horizontal scales and its impact on photo-oxidant formation
- 16:00 **MÜLLER, F.; SCHLÜNZEN, K.H.; SCHATZMANN, M.**  
Test of mathematical solvers for chemical mechanisms in 3D-air quality models
- 16:15 **MANTILLA, E.; MILLAN, M.; SALVADOR, R.; SANZ, J.M.; CARRATALA, A.; PALAU, J.L.**  
Tracking the dynamics of an elevated plume on the Spanish Levantine coast
- 16:30 **SCHMIDT, H.; ELBERN, H.; EBEL, A.**  
4D variational assimilation of ozone data with the EURAD-CTM
- 16:45 **JAKOBS, H.J.; EBEL, A.; JACOBSEN, I.; RISSMANN, J.; FRIEDRICH, R.; WICKERT, B.; FIEDLER, F.; NESTER, K.**  
A model network for operational regional ozone forecast \*
- 17:00 END OF SESSION

## **OA11 Mesoscale transport of air pollution, including land/sea areas - Poster Session**

Convener: Mikkelsen, T.  
Co-Convener(s): Artinano, B.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Tuesday, 17:30 - 19:00  
Poster Area: LES MUSES

- OA263 **RUA, A.; GIMENO, L.; MARTIN, I.; HERNANDEZ, E.**  
Trends and seasonal variations of  $\text{NH}_4^+$  in the air of Spanish EMEP stations
- OA264 **RUA, A.; BOURHIM, S.; HERNANDEZ, E.**  
Analysis cluster characterizing  $\text{SO}_2$  and sulphate patterns in Europe
- OA265 **DE RIDDER, K.; MENSINK, C.**  
Remotely sensed surface sensible heat flux for air pollution dispersion studies
- OA266 **BROJEWSKI, R.**  
Effective modelling of the low tropospheric flows and advective-diffusive processes with a singular initial conditions
- OA267 **CANEPA, E.; MODESTI, F.; RATTO, C.F.**  
Performances of the dispersion code SAFE\_AIR using different procedures to calculate the advective wind
- OA268 **RUA, A.; GIMENO, L.; HERNANDEZ, E.**  
Geographical sources of suspended particulated matter in Spain
- OA269 **RUA, A.; GIMENO, L.; HERNANDEZ, E.**  
Trends and seasonal variations of the suspended particulated matter in Spain
- OA270 **RUA, A.; GIMENO, L.; MARTIN, I.; HERNANDEZ, E.**  
Geographical sources of  $\text{NH}_4^+$  in Spain

- OA271 **PERIS, G.; SANZA, G.; CARDA, J.; ESTEVE, V.**  
Quantitative X-ray diffraction analysis and size distribution of airborne particulate
- OA272 **SANZA, G.; DELGADO, C.; CARDA, J.; ESTEVE, V.**  
Tropospheric aerosol at three Mediterranean sites: elemental composition of fine airborne particulate
- OA273 **MOLUS, I.; DELGADO, C.; ROSEL, J.; ESTEVE, V.**  
X-ray diffraction phase identification of the atmospheric aerosol near the Mediterranean coast
- OA274 **DELGADO, C.; SANZA, G.; ROSEL, J.; ESTEVE, V.**  
X-ray fluorescence elemental analysis of TSP at Castellon, Spain
- OA275 **QUEROL, X.; ALASTUEY, A.; MANTILLA, E.; MIRO, J.V.; LOPEZ-SOLER, A.; PLANA, F.; ARTINANO, B.**  
Determination of source origin of atmospheric total suspended particles and PM10 peaks in a rural area from the western Mediterranean basin

## **OA12 Extreme weather events in the Mediterranean**

Convener: Prodi, F.  
Co-Convener(s): Eidelman, A.E.  
Monday, 20 April 1998  
Lecture Room: THALIE  
Chairperson: N.N.  
Editors: Prodi, F.; Fantini, M.; Malguzzi, P.; Buzzi, A.

- 11:00 **FANTINI, M.**  
OA12-001 Role of parameterized moisture effects in the development of mesoscale vortices
- 11:15 **LIONELLO, P.; MALGUZZI, P.; SANNA, A.**  
OA12-002 Air-sea fluxes during the development of a Mediterranean cyclone
- 11:30 **MALGUZZI, P.; CHESSA, P.; BUZZI, A.**  
OA12-003 The role of surface heat fluxes in the development of a Mediterranean "hurricane"
- 11:45 **EIDELMAN, A.; GOLBRAIKH, E.**  
OA12-004 Extreme atmospheric events formation due to helical turbulence and its laboratory simulation
- 12:00 **GOLDBAUM, B.; EIDELMAN, A.; BRANOVER, H.; MOISEEV, S.S.**  
OA12-005 Turbulence in the wake and vortex quasi-particles
- 12:15 **REALE, O.**  
OA12-006 Dynamics and classification of two sub-synoptic scale "hurricane-like" vortices over the Mediterranean Sea
- 12:30 **MUGNAI, A.; ACCADIA, C.; DIETRICH, S.; MARZANO, F.S.; ROBERTI, L.**  
OA12-007 SSM/I analysis of two "hurricane-like" vortices over the Mediterranean Sea
- 12:45 **PYTHAROULIS, I.; CRAIG, G.C.; BALLARD, S.P.**  
OA12-008 Study of the hurricane-like Mediterranean cyclone of January 1995
- 13:00 LUNCH

Chairperson: N.N.

Editors: Prodi, F.; Fantini, M.; Malguzzi, P.; Buzzi, A.

14:00 **ESTARELLAS, C.; JANSÁ, A.; GENOVES, A.;**  
OA12- CAMPINS, J.; PICORNELL, M.A.

009 A case of deep cyclone associated to extreme weather in the Mediterranean

14:15 **BAUER, P.; DRÜEN, B.; SCHANZ, L.; SCHULZ,**  
OA12- J.

010 Severe flood events in central Europe: a comparison between satellite-derived rain rates and radar measurements

14:30 **SENESE, S.; MOREL, C.**

OA12- A climatology of mesoscale convective systems south of the Alps

14:45 **LAGOUVARDOS, K.; KOTRONI, V.; KALLOS,**  
OA12- G.

012 On the March 1987 extreme cold outbreak over the Greek peninsula

15:00 **KOTRONI, V.; LAGOUVARDOS, K.; KALLOS,**  
OA12- G.; ZIAKOPOULOS, D.

013 Observational and model analysis of a severe flooding event over Greece

15:15 **QUADRI, C.; FEHLMANN, R.; DAVIES, H.C.**  
OA12- Upper-level PV structures and heavy precipitation south of the Alps: a sensitivity study

15:30 **SCHNEIDERREIT, M.; SCHÄR, C.**

OA12- Atmospheric flow regimes associated with a Piedmont-like low-level jet

15:45 **ROMERO, R.; RAMIS, C.; GUIJARRO, A.**

OA12- Objective classification of the heavy rainfall patterns in Mediterranean Spain

16:00 **FREI, C.; SCHÄR, C.**

OA12- Heavy precipitation along the southern rim of the Alps: a climatology from high-resolution rain-gauge data

16:15 **MAUGERI, M.; BARBIERO, R.; BELLUME, M.**  
OA12- Reconstruction of heavy rainfall events over the Po basin from 1868 to the end of the 19th century

16:30 **BURDE, G.I.**

OA12- A model for dynamic explanation of some dust events

16:45 END OF SESSION

17:00 Opening

19:30 Reception

## OA12 Extreme weather events in the Mediterranean - Poster Session

Convener: Prodi, F.

Co-Convener(s): Eidelman, A.E.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: LES MUSES

Chairperson: N.N.

Editors: Prodi, F.; Fantini, M.; Malguzzi, P.; Buzzi, A.

OA309 **TAURAT, D.; KLEPP, C.; PAPKE, F.**

OA12-021 Monitoring of raining systems using SSM/I and METEOSAT data

OA310 **TRIGO, I.F.; DAVIES, T.D.; BIGG, G.R.**

OA12-022 Objective climatology of cyclones in the Mediterranean region

OA311 **GIMENO, L.; RUA, A.; GOMEZ, M.;**

OA12-023 OLALLA, R.  
Extreme wind events in Spain

OA312 **GIMENO, L.; RUA, A.; RODRIGUEZ, T.;**  
OA12-024 TESOIRO, M.

Extreme precipitation events in Spain

OA313 **MOROZOVSKY, E.**

OA12-025 Case study of a frontal passage over Israel

OA314 **ARNAUD, P.; PICARD, S.; LAVABRE, J.;**

OA12-026 DOUGUEDROIT, A.

Hourly rainfall stochastic generation: application on French Mediterranean seaboard

OA315 **BONASONI, P.; BONAFE, U.; CALZOLARI,**  
OA12-027 F.; COLOMBO, T.; EVANGELISTI, F.; LENAZ, R.; SANTAGUIDA, R.; TESI, G.

Dust transport across the Mediterranean basin and simultaneous abrupt change in the free troposphere trace gases behaviour

OA316 **BARGAGLI, A.; CARILLO, A.; MARIOTTI,**  
OA12-028 A.; PISACANE, G.; RUTI, P.M.; STRUGLIA, M.V.

An integrated forecast system over the Mediterranean Basin: extreme surge prediction in the northern Adriatic Sea

OA317 **MIRANDA, P.M.A.; SOARES, P.M.M.,**  
OA12-029 ALMEIDA, M.

A case of extreme precipitation in southern Portugal

OA318 **PORCU, F.; DIETRICH, S.; MUGNAI, A.;**

OA12-030 NATALI, S.; PRODI, F.; CONWAY, P.

Satellite multi-frequency observations of severe convective systems in the Mediterranean

OA318A **GOLBRAIKH, E.; CHKHETIANI, O.G.;**

OA12-031 MOISEEV, S.S.; EIDELMAN, A.; BRANOVER, H.

On the character of turbulent energy redistribution in helical flows

OA318B **GRANBERG, I.G.**

OA12-032 Numerical simulation of possible extreme events due to orography at Cyprus

OA318C **STRELEC-MAHOVIC, N.; BRZOVIC, N.**

OA12-033 Cyclonic activity and severe jugo in the Adriatic

## OA13 Cyclogenesis and fronts: FASTEX I

Convener: Chalon, J.-P.

Co-Convener(s): Thorpe, A.J.

Wednesday, 22 April 1998

Lecture Room: CLIO

Chairperson: Snyder

14:00 **JOLY, A.; BESSEMOULIN, P.; BROWNING,**  
K.A.; CAMMAS, J.P.; CHALON, J.P.; CLOUGH, S.A.; EMANUEL, K.A.; GALL, R.; HILDEBRAND, P.H.; JORGENSEN, D.; LANGLAND, R.H.; LEMAITRE, Y.; MASCART, P.; MOORE, J.A.; PERSSON, P.O.G.; SHAPIRO, M.A.; SNYDER, C.; TOTH, Z.; WAKIMOTO, R.M.

The Fronts and Atlantic Storm-Track Experiment (FASTEX): an overview of the field phase (Solicited Paper)

14:30 **BADGER, J.; HOSKINS, B.J.**

Mechanisms for mid-latitude cyclone development

14:45 **SHAPIRO, M.A.; WERNLI, H.**

Upstream baroclinic development of secondary frontal-wave cyclones: idealized and observed

15:00 **MALARDEL, S.; ARBOGAST, P.; JOLY, A.**

Interpretation of mid-latitude cyclogenesis using a linear framework

OA

- 15:15 **RAVETTA, F.**; **ANCELLET, G.**; **CAMMAS, J.-P.**  
Two-dimensional airborne ozone measurements during FASTEX
- 15:30 **FEHLMANN, R.**; **DAVIES, H.C.**  
Role of salient PV-elements in an event of frontal-wave cyclogenesis
- 15:45 **THORNCROFT, C.**; **JONES, S.**  
The extratropical transformation of Atlantic hurricanes in 1995
- 16:00 **THORPE, A.J.**  
A review of theories of frontal-scale dynamics (Solicited Paper) \*
- 16:30 **CAMMAS, J.-P.**; **POUPONNEAU, B.**; **DESROZIER, G.**; **SANTURETTE, P.**; **JOLY, A.**  
Overview of the life cycle of a FASTEX cyclone: IOP 17
- 16:45 END OF PART I

### OA13 Cyclogenesis and fronts: FASTEX II

Convener: Chalon, J.-P.  
Co-Convener(s): Thorpe, A.J.  
Thursday, 23 April 1998  
Lecture Room: CLIO  
Chairperson: Thorpe, A.J.

- 08:30 **BLUMEN, W.**  
The frontal width problem
- 08:45 **CHABOUREAU, J.-P.**; **THORPE, A.J.**  
Role of frontogenesis on frontal wave development in FASTEX
- 09:00 **PARKER, D.**  
A secondary frontal wave in negative strain
- 09:15 **HEWSON, T.**; **RENFREW, I.**; **BISHOP, C.**  
Frontal wave development in numerical model forecasts
- 09:30 **YAMAZAKI, Y.H.**; **PELTIER, W.R.**  
Sub-synoptic scale instability along the jet stream
- 09:45 **BRYAN, G.H.**; **CHARNEY, J.J.**; **FRITSCH, J.M.**  
Discrete frontal propagation induced by convection
- 10:00 **CHARNEY, J.J.**; **FRITSCH, J.M.**  
Discrete frontal propagation in a non-convective environment
- 10:15 **JUCKES, M.N.**  
The ageostrophic circulation in baroclinic waves growing on frontal temperature gradients
- 10:30 **GRIFFITHS, M.**; **THORPE, A.J.**; **BROWNING, K.A.**  
The role of the tropopause in destabilizing the atmosphere
- 10:45 BREAK

Chairperson: Hildebrandt

- 11:00 **SHAPIRO, M.A.**  
Review of ideas concerning mesoscale structure within extra-tropical cyclones (Solicited Paper) \*
- 11:30 **MALLET, I.**; **CAMMAS, J.-P.**; **MASCART, P.**  
Mesoscale modelling of a FASTEX cyclone: sensitivity to physical processes during early stages of development
- 11:45 **CLOUGH, S.**; **ROBERTS, N.**; **LEAN, H.**  
Comparison of mesoscale dynamical structures from FASTEX dropsoundings with forecast model fields

- 12:00 **BOUNOL, D.**; **LEMAITRE, Y.**; **MONTMERLE, T.**  
Three dimensional study of dynamical and thermodynamical fields deduced from airborne Doppler radar and dropsonde data
- 12:15 **MOINE, M.-P.**; **ROUX, F.**  
Dynamic and thermodynamic structure of the mid-latitude cyclone observed on 19 February 1997 during FASTEX
- 12:30 **LAMBERT, D.**; **CAMMAS, J.-P.**; **MASCART, P.**  
Structure and evolution of the boundary layer during the FASTEX IOP 18
- 12:45 **LEMAITRE, Y.**; **SCIALOM, G.**; **BOUNOL, D.**  
Multiscale processes involved in the mature phase of a "bomb like" deepening
- 13:00 END OF SESSION

### OA13 Cyclogenesis and fronts: FASTEX - Poster Session

Convener: Chalon, J.-P.  
Co-Convener(s): Thorpe, A.J.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Thursday, 17:00 - 19:00  
Poster Area: LES MUSES  
Chairperson: Mascart, P.

- OA276 **JAUBERT, G.**; **PIRIOU, C.**  
The FASTEX database: a large archive for north Atlantic cyclones studies
- OA277 **MALLET, I.**; **CAMMAS, J.-P.**; **BAEHR, C.**  
Role of the environmental flow and contribution of a decaying low on the development of a FASTEX cyclone (IOP17)
- OA278 **SZÖCS, H.L.**; **KOSA-KISS, A.**  
New observational proofs for short-term variations of formations of lower troposphere assigned to great sunspots as contributions to the cyclogenesis
- OA279 **MARQUET, P.**  
Application of exergy theory to local atmospheric energetics: diagnostics for a FASTEX event
- OA280 **BIRKETT, H.R.**; **THORPE, A.J.**  
Reduced upper-tropospheric potential vorticity
- OA281 **DONNADILLE, J.**; **CAMMAS, J.-P.**; **MASCART, P.**  
Upper level dynamic of a FASTEX cyclone: IOP 18
- OA282 **FOURRIE, N.**; **CLAUD, C.**; **JOLY, A.**; **CAMMAS, J.-P.**  
Identification of tropopause-level thermal anomalies from TOVS observations
- OA283 **JUCKES, M.N.**  
How do cyclones affect the large scale mean height of the tropopause?
- OA284 **CLOUGH, S.**; **LEAN, H.**  
Observations and simulations of a developing frontal wave during FASTEX IOP 16
- OA285 **BROWNING, K.A.**; **ROBERTS, N.M.**  
Mesoscale analysis of arc rainbands in a dry slot
- OA286 **HILDEBRAND, P.H.**  
Aircraft observations of frontal circulations and structures in FASTEX
- OA287 **SCIALOM, G.**; **LEMAITRE, Y.**; **PROTAT, A.**  
Overview of the mesoscale circulation and vorticity within systems sampled during FASTEX

- OA288 **BERGOT, T.; DESROZIER, G.;**  
POUPONNEAU, B.; JOLY, A.  
Adjoint-based targeted observations during  
FASTEX: impact and feasibility studies
- OA289 **MONTANI, A.; THORPE, A.J.**  
Use of ECMWF singular vectors for targeting  
during FASTEX
- OA290 **SZUNYOGH, I.; TOTH, Z.; BISHOP, C.;**  
EMANUEL, K.; SNYDER, C.; WOOLLEN, J.;  
WU, W.-S.; MARCHOK, T.; MORSS, R.  
Ensemble-based targeted observations during  
FASTEX
- OA291 **SNYDER, C.; TRIER, S.; MORSS, R.**  
Dynamics and statistics of forecasts errors in a  
quasi-geostrophic model
- OA292 **ARBOGAST, P.; JOLY, A.**  
Precursors identification of FASTEX IOP17  
cyclogenesis using potential vorticity inversion  
concept

# **OA14 Parametrizations in large scale atmospheric models** **1 Intercomparison and validation of the ocean-atmosphere flux fields I**

Convener: Gulev, S.  
Co-Convener(s): Taylor, P.K.  
**Monday, 20 April 1998**  
Lecture Room: ERATO  
Chairperson: Gulev, S.

## Surface fluxes in atmospheric models

- 09:00 **GULEV, S.; TAYLOR, S.; VITERBO, P.**  
Session overview
- 09:15 **STENDEL, M.; BENGTTSSON, L.**  
The hydrological cycle from high resolution assimilation experiments for selected regions of the Earth (Solicited Paper)
- 09:45 **ROADS, J.; AUAD, G.; MILLER, A.; CAYAN, D.;**  
CHEN, S.; WHITE, W.  
Comparison and utilization of NCEP GSM surface stress and energy and water fluxes for coupled ocean-atmosphere modelling and prediction
- 10:00 **DE MONTETY, A.; FICHEFET, TH.; PONCIN, CH.**  
Impact of the horizontal grid in an atmospheric model
- 10:15 **JOSSE, P.; CANIAUX, G.; PLANTON, S.**  
Intercomparison of ocean atmosphere fluxes from atmospheric and oceanic mesoscale simulations
- 10:30 **BREAK**

Chairperson: Gulev, S.

## Forcing fields for ocean modelling

- 11:00 **BARNIER, B.**  
Forcing ocean general circulation models with air-sea flux fields (Solicited Paper)
- 11:30 **GULDBERG, A.; KAAS, E.**  
Using tendency errors to optimize horizontal diffusion in a general circulation model

- 11:45 **FERRY, N.; REVERDIN, G.; OSCHLIES, A.**  
An OGCM simulation forced by daily ECMWF surface fluxes: how to deduce oceanic heat fluxes from sea level variations?
- 12:00 **MCCULLOCH, M.E.; LEACH, H.**  
Validation of FOAM model fluxes using data from the Vivaldi-96 cruise in the northeast Atlantic
- 12:15 **SCHRUM, C.**  
Investigation of the heat budgets for North Sea and Baltic Sea. Results of model experiments
- 12:30 **LUNCH**

Chairperson: Taylor, P.K.

## Enclosed seas and regional balances: VOS climatologies and field experiments

- 14:00 **ISEMER, H.-J.; LINDAU, R.; JACOB, D.**  
Evaporation at the surface of the Baltic Sea
- 14:15 **ROZWADOWSKA, A.**  
Uncertainty in estimation of mean solar radiation fluxes at the Baltic surface from irregular ship-borne meteorological observations
- 14:30 **SCHIANO, M.E.; BORGHINI, M.;**  
BELARDINELLI, F.; LUTTAZZI, C.  
A critical analysis of the empirical formulae for estimating the radiative fluxes over the western Mediterranean Sea
- 14:45 **MOORE, G.W.K.; ALVERSON, K.**  
Air-sea interaction and the Weddell polynya
- 15:00 **REPINA, I.A.**  
Air-sea-ice interaction in polar regions on the base of experimental data
- 15:15 **CANIAUX, G.; EYMARD, L.; GIORDANI, H.**  
The sea surface flux dataset collected during the CATCH/FASTEX experiment
- 15:30 **BUMKE, K.; KARGER, U.; GROSSKLAUS, M.**  
Air-sea flux and precipitation measurements in the Labrador sea during February and March 1997
- 15:45 **RENFREW, I.A.; MOORE, G.W.K.**  
Observations of roll vortices during an extreme cold air outbreak over the Labrador Sea
- 16:00 **GROSSKLAUS, M.; HASSE, L.**  
Dropsize distributions of marine tropical precipitation from different climatic regions
- 16:15 **FENG, M.; HACKER, P.; LUKAS, R.**  
Upper ocean heat and salt balances in the western equatorial Pacific during TOGA COARE
- 16:30 **DOBROLIUBOV, S.A.**  
The North Atlantic ocean-atmosphere heat and fresh water flux variability derived from oceanographic repeated sections data
- 16:45 **END OF PART I**
- 17:00 **Opening**
- 19:30 **Reception**

## **Attend the Business Meeting of your Section**

on Wednesday, 22 April, 12.00-14.00, Lecture Room Clio

**OA14 Parametrizations in large scale atmospheric models**  
**.1 Intercomparison and validation of the ocean-atmosphere flux fields II**

Convener: Gulev, S.  
 Co-Convener(s): Taylor, P.K.  
**Tuesday, 21 April 1998**  
 Lecture Room: ERATO  
 Chairperson: Lukas, R.

Remotely sensed flux fields, waves and stress

- 08:45 **SCHULZ, J.; JOST, V.**  
 On the sampling error of microwave rain rate retrievals in the tropical Pacific
- 09:00 **LIU, Q.**  
 Derivation of the latent heat flux over Atlantic Ocean by satellite-borne microwave radiometer
- 09:15 **BAUER, E.; BÜRGER, G.**  
 On the history of ocean waves in the North Sea
- 09:30 **MAKIN, V.K.**  
 Wind over waves coupling
- 09:45 **GOURRION, J.; CHAPRON, B.; VANDEMARK, D.; ELFOUHAILY, T.**  
 Satellite-derived ocean surface roughness and its use in regional wind stress determination

10:00 Poster Summaries

**GULEV, S.; DOBROLIUBOV, S.**  
 Intercomparison of the regional heat balances from hydrographic data and VOS observations for the North Atlantic mid latitudes  
**VOLKOV, YU.A.; REPINA, I.A.**  
 Measuring of atmosphere-sea-land interaction in northern part of Caspian Sea  
**KUZMIERCZYK-MICHULEC, J.; ROZWADOWSKA, A.**  
 Retrieval of optical properties of the Baltic aerosols - comparison of two methods  
**SHIFRIN, K.S.; ZOLOTOV, I.G.**  
 A method for determining the wind velocity from lidar measurements of atmospheric aerosol  
**JOST, V.; SCHULZ, J.**  
 HOAPS: a satellite-derived water balance climatology  
**GOODRICK, S.L.; BOURASSA, M.A.; LEGLER, D.M.**  
 Impact of surface layer height consideration on air-sea fluxes for the North Atlantic  
**EWALD, S.; SCHLÜSSEL, P.**  
 Foam coverage and skineffect of the ocean from satellite data  
**COMPAGNUCCI, R.; SALLES, M.A.**  
 ENSO events impact on the atmospheric circulation and anomalies of the main climatic variables over the southern cone  
**MOAT, B.I.; YELLAND, M.J.; TAYLOR, P.K.**  
 The impact of airflow distortion on in-situ meteorological wind speed measurements  
**KAPALA, A.; MAECHEL, H.**  
 Comparison of surface humidity and air temperature above the oceans from NCEP and COADS data sets

**QUILFEN, Y.; BENTAMY, A.; GRIMA, N.; DELECLUSE, P.**  
 Use of satellite fluxes for ocean modelling  
 10:30 END OF SUB-SESSION

**OA14 Parametrizations in large scale atmospheric models**  
**.1 Intercomparison and validation of the ocean-atmosphere flux fields - Poster Session**

Convener: Gulev, S.  
 Co-Convener(s): Taylor, P.K.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: LES MUSES

- OA157 **GULEV, S.; DOBROLIUBOV, S.**  
 Intercomparison of the regional heat balances from hydrographic data and VOS observations for the North Atlantic mid latitudes
- OA158 **VOLKOV, YU.A.; REPINA, I.A.**  
 Measuring of atmosphere-sea-land interaction in northern part of Caspian Sea
- OA159 **KUZMIERCZYK-MICHULEC, J.; ROZWADOWSKA, A.**  
 Retrieval of optical properties of the Baltic aerosols - comparison of two methods
- OA160 **SHIFRIN, K.S.; ZOLOTOV, I.G.**  
 A method for determining the wind velocity from lidar measurements of atmospheric aerosol
- OA161 **JOST, V.; SCHULZ, J.**  
 HOAPS: a satellite-derived water balance climatology
- OA162 **GOODRICK, S.L.; BOURASSA, M.A.; LEGLER, D.M.**  
 Impact of surface layer height consideration on air-sea fluxes for the North Atlantic
- OA164 **EWALD, S.; SCHLÜSSEL, P.**  
 Foam coverage and skineffect of the ocean from satellite data
- OA165 **COMPAGNUCCI, R.; SALLES, M.A.**  
 ENSO events impact on the atmospheric circulation and anomalies of the main climatic variables over the southern cone
- OA166 **MOAT, B.I.; YELLAND, M.J.; TAYLOR, P.K.**  
 The impact of airflow distortion on in-situ meteorological wind speed measurements
- OA167 **KAPALA, A.; MAECHEL, H.**  
 Comparison of surface humidity and air temperature above the oceans from NCEP and COADS data sets
- OA168 **QUILFEN, Y.; BENTAMY, A.; GRIMA, N.; DELECLUSE, P.**  
 Use of satellite fluxes for ocean modelling

---

**Attend the Poster Session**

---

**OA14 Parametrizations in large scale atmospheric models**  
**.2 Major systematic errors in global coupled models**

Convener: Stephenson, D.B.

Co-Convener(s): Balmaseda, M.A.

Wednesday, 22 April 1998

Lecture Room: ERATO

Chairpersons: Stephenson, D.B.; Balmaseda, M.A.

- 09:00 **DIXON, K.W.**; **STOUFFER, R.J.**  
 Initialization and climate drift issues found in coupled climate model integrations
- 09:15 **BOVILLE, B.A.**; **GENT, P.R.**  
 Systematic errors in the NCAR Climate System Model: sensitivity to model formulation
- 09:30 **BALMASEDA, M.**; **ALVES, J.**; **ANDERSON, D.**; **SEGSCHNEIDER, J.**; **STOCKDALE, T.**  
 Model drift in the seasonal predictions at ECMWF
- 09:45 **PONCIN, CH.**; **FICHEFET, TH.**; **GOOSSE, H.**  
 Sensitivity experiments with a coupled atmosphere-ocean general circulation model
- 10:00 **KAAS, E.**; **GULDBERG, A.**  
 Using tendency errors as additional forcing in a general circulation model
- 10:15 **LI, Z.X.**; **FORICHON, M.**  
 Sensitivity of surface heat flux to physical parameterization in the IPSL couple model
- 10:30 **BREAK**
- 10:45 **COVEY, C.**; **COHEN-SOLAL, E.**  
 The Coupled Model Intercomparison Project
- 11:00 **STEPHENSON, D.B.**; **PAVAN, V.**; **DOBLAS-REYES, F.J.**; **BORJARIU, R.**  
 North Atlantic oscillation interannual variability in observations and CMIP coupled GCMs runs
- 11:15 **LEGUTKE, S.**; **VOSS, R.**; **CUBASCH, U.**  
 A coupled ocean-atmosphere climate model with inhomogeneous gridcell surfaces
- 11:30 **FILIBERTI, M.-A.**; **DUFRESNE, J.-L.**  
 An assessment of the role of the atmosphere in antarctic sea-ice extension in global coupled models
- 11:45 **ROESCH, A.**  
 Observational validation and implementation of modifications of the surface albedo parameterization in the ECHAM4 GCM
- 12:00 **LUNCH**
- 12:00 **Business Meetings**

Chairperson: Fischer, M.

- 14:00 **MECHOSO, C.R.**; **YU, J.-Y.**; **MA, C.-C.**  
 Improvements achieved in a coupled GCM obtained by addressing systematic errors in the eastern equatorial Pacific
- 14:15 **FISCHER, M.**; **NAVARRA, A.**  
 Tropical systematic errors of the Giotto model
- 14:30 **DEWITT, D.G.**  
 Sensitivity of the simulated climate in the tropical Pacific to ocean mixing
- 14:45 **COHEN-SOLAL, E.**; **LE TREUT, H.**; **MUSAT, I.**  
 Analyse of the tropical cold anomaly in the LMD/IPSL coupled model

- 15:00 **VINTZILEOS, A.**; **DUFRESNE, J.-L.**; **LE TREUT, H.**; **SADOURNY, R.**  
 Tropical Pacific variability simulated in a one hundred year run of a coupled general circulation model

15:15 **END OF SUB-SESSION**

Session OA14.03 continues

**OA14 Parametrizations in large scale atmospheric models**  
**.3 Sensitivity of radiative perturbations in global coupled models**

Convener: Boucher, O.

Wednesday, 22 April 1998

Lecture Room: ERATO

Chairperson: N.N.

- 15:15 **ROECKNER, E.**; **FEICHTER, J.**  
 Climate response to radiative forcings by greenhouse gases and aerosols (Solicited Paper)
- 15:45 **VALCKE, S.**; **BATHELET, P.**; **TERRAY, L.**  
 Performance of a global coupled simulation of climate change associated with a doubling in the CO<sub>2</sub> atmospheric concentration
- 16:00 **RICARD, J.L.**; **BARTHELET, P.**; **TERRAY, L.**; **VALCKE, S.**  
 First results of a 2XCO<sub>2</sub> experiment with a global coupled model
- 16:15 **BONY, S.**; **DUFRESNE, J.-L.**; **FAIRHEAD, L.**  
 An analysis of tropical cloud radiative feedbacks in a coupled ocean-atmosphere model (Solicited Paper)
- 16:45 **CLEMENT, A.C.**; **SEAGER, R.**  
 The tropical oceans and climate change
- 17:00 **END OF SESSION**

**OA14 Parametrizations in large scale atmospheric models**  
**.3 Sensitivity of radiative perturbations in global coupled models - Poster Session**

Convener: Boucher, O.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:30 - 19:00

Poster Area: LES MUSES

- OA170C **BERTRAND, C.**; **VAN YPERSELE, J.-P.**  
 Sulphate aerosols and transient climate simulations
- OA170D **KIRCHNER, I.**; **STENCHIKOV, G.L.**; **GRAF, H.-F.**; **ROBOCK, A.**  
 The Pinatubo aerosol forcing - estimated with ECHAM4 and the simulated climate response

\* not included in the Book of Abstracts

OA

## OA15 Clouds and their impact on radiation and photo-chemical processes

### .1 Remote sensing of clouds and aerosols - Poster Session

Convener: Raschke, E.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: LES MUSES

Chairperson: Raschke, E.

Editor: Raschke, E.

OA293 CHEPFER, H.; FLAMANT, P.H.; SAUVAGE, L.; PELON, J.; COUVERT, P.; CHAZETTE, P.; SEZE, G.; GOLOUB, P.; BROGNIEZ, G.; SPINHIRNE, J.; LAVORATO, M.; ANSANA, S. Validation of semi-transparent cloud POLDER products using lidar measurements

OA294 CREWELL, S.; LÖHNERT, U.; MEBOLD, H.; SIMMER, C. Remote sensing of clouds using a groundbased multi-sensor system

OA295 CAPDEROU, M. Determination of the shortwave anisotropic function for clear-sky desert scenes from SCAR-AB data. Comparison with models issued from other satellite data

OA296 KÄRNER, O. A multidimensional histogram method to analyze AVHRR data

OA297 STURNIOLO, O.; PRODI, F.; MEDINI, R.; BATTAGLIA, A. Cloud simulations with randomly oriented axially symmetric hydrometeors

OA298 BETANCOR GROTHE, M.; DREYER, M.; BAKAN, S.; COSTANZO, C. Ground based passive remote sensing of ice clouds with scattered solar radiation in the near infrared

OA299 SMITH, S.A. The horizontal variability of cirrus clouds

## OA15 Clouds and their impact on radiation and photo-chemical processes

### .1 Remote sensing of clouds and aerosols

Convener: Raschke, E.

Friday, 24 April 1998

Lecture Room: THALIE

Chairperson: Raschke, E.

Editor: Raschke, E.

10:00 SOMERVILLE, R.C.J.

OA15.1- Single-column models, ARM observations, and GCM cloud-radiation schemes (Solicited Paper)

10:30 BREAK

Chairperson: Raschke, E.

Editor: Raschke, E.

#### Simultaneous use of cloud radar and lidar

11:00 LIU, C.-L.; ILLINGWORTH, A.J.

OA15.1- Cirrus cloud particle sizing using spaceborne radar/lidar system

11:15 RANDEU, W.L.; WITTERNIGG, N.

OA15.1- Outline specifications of ground-based cloud radars and their possible involvement in the Earth radiation mission

11:30 WITTERNIGG, N.; RANDEU, W.L.; LEITNER, M.

OA15.1- Scattering calculations for the simulation of radar returns in realistic cloud scenarios

11:45 WEITKAMP, C.; DANNE, O.; FLINT, H.

OA15.1- LAHMANN, W.; QUANTE, M.; RASCHKE, E.; THEOPOLD, F.A.

95-GHz radar/720-nm lidar simultaneous measurements of clouds at GKSS

12:00 DANNE, O.; QUANTE, M.; MILFERSTÄDT, D.

OA15.1- RASCHKE, E.; WEITKAMP, C. Investigations of cloud layer base and top heights from 95 GHz radar reflectivity data

12:15 FEIJT, A.; JONGEN, S.; VAN LAMMEREN, A.

OA15.1- Validation of satellite cloud parameter retrieval methods with objective ground based measurements

12:30 DAVIS, A.; CAHALAN, R.; SPINHIRNE, J.

OA15.1- WINKLER, D.; GERSTL, S.; MELFI, S.H. Off-beam lidar: an emerging technique in cloud remote-sensing

12:45 LUNCH

Chairperson: van Lammeren, A.C.

Editor: Raschke, E.

#### Observations of clouds by satellites and with aircraft

14:00 SPANG, R.; PREUSSE, P.; FRANZEN, A.

OA15.1- GROSSMANN, K.U.; OFFERMANN, D. Cloud detection in the upper troposphere and lower stratosphere by CRISTA 1/2

14:15 ASTIN, I.

OA15.1- Investigation of the error in derived mean cloud cover for a proposed space-borne cloud radar

14:30 COSTANZO, C.; BAKAN, S.

OA15.1- Estimation of cirrus and multi-layer cloud parameters from multispectral measurements in the near-infrared

14:45 DUROURE, C.; AURIOL, F.; CREPEL, O.

OA15.1- GAYET, J.F. Microscale inhomogeneities study using high resolution polar nephelometer measurements

15:00 JOLIVET, D.; PAROL, F.; BURIEZ, J.-C.

OA15.1- On the deviation of the bidirectional reflectance of inhomogeneous clouds from the plane parallel model

15:15 FAURE, T.; GUILLEMET, B.; ISAKA, H.

OA15.1- EYMARD, L.

15:30 Heterogeneity effect on microphysicals retrieval parameters by satellite at different scale

15:30 BREAK

Chairperson: van Lammeren, A.C.

Editor: Raschke, E.

16:00 ALBERS, F.; RASCHKE, E.; REUTER, A.

OA15.1- MAIXNER, U.; LEVKOV, L.; SEDNEV, I. Horizontal inhomogeneities in clouds and their effect of remote particle measurements

16:15 BÖSCH, H.; FUNK, O.; WAGNER, T.; PLATT, U.

OA15.1- U.; PFEILSTICKER, K. Clear and cloudy sky case studies of O<sub>4</sub> and oxygen A-band absorptions as seen by GOME

16:30 FUNK, O.; VEITEL, H.; PLATT, U.;  
 OA15.1- PFEILSTICKER, K.  
 017 Comparison of measured and modeled oxygen  
 A-band high resolution absorption spectra as a test  
 for RT calculations  
 16:45 Concluding Remarks  
 17:00 END OF SESSION

## OA15 Clouds and their impact on radiation and photo-chemical processes .2 Modelling of cloud systems

Convener: Mölders, N.  
**Thursday, 23 April 1998**  
 Lecture Room: THALIE  
 Chairperson: Mölders, N.  
 Editor: Mölders, N.

11:00 BICKMEIER, W.; BORREGO, C.; COUTINHO,  
 OA15.2- M.; ERNST, G.; KUNZ, R.; MOUSSIOPOULOS, N.  
 001 The parameterization of the microphysical processes  
 and the radiative transfer in the mesoscale model  
 MEMO  
 11:15 MÖLDERS, N.; FRIEDRICH, K.; KRAMM, G.  
 OA15.2- On the sensitivity of cloud microphysics to the  
 002 energy and water fluxes at the interface  
 Earth-atmosphere  
 11:30 AHRENS, B.; KARSTENS, U.; ROCKEL, B.;  
 OA15.2- STUHLMANN, R.  
 003 REMO in forecast mode with ice physics in the  
 cloud and in the radiation scheme  
 11:45 COHARD, J.-M.; PINTY, J.-P.  
 OA15.2- Design, tests and first applications of a two-moment  
 004 warm cloud scheme in a non-hydrostatic model  
 12:00 KRISTIANSEN, J.; KRISTJANSSON, J.E.  
 OA15.2- Shortwave cloud forcing of marine stratocumulus  
 005 clouds  
 12:15 HAASE, G.; SIMMER, C.  
 OA15.2- A radar simulation model for the validation of  
 006 mesoscale dynamic models  
 12:30 KURZ, C.; FUNK, O.; VEITEL, H.; PLATT, U.;  
 OA15.2- PFEILSTICKER, K.  
 007 Experimentally determined photon pathlength distri-  
 butions for different meteorological situations  
 12:45 PFEILSTICKER, K.  
 OA15.2- On the influence of the cloud morphology and  
 008 inhomogeneities on optical pathlengths and the cloud  
 sky SW-absorption  
 13:00 END OF SUB-SESSION

## Climate Dynamics

Welcomes papers containing original diagnostic, analytical  
 or numerical modelling research on the structure and  
 behaviour of the atmosphere, oceans, cryosphere, biomass  
 and land surface as interacting components of the dynamics  
 of global climate as well as contributions focused on  
 selected aspects of climate dynamics on particular scales of  
 space or time.

## OA15 Clouds and their impact on radiation and photo-chemical processes .2 Modelling of cloud systems - Poster Session

Convener: Mölders, N.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: LES MUSES  
 Chairperson: Kramm, G.  
 Editor: Mölders, N.

OA300 KRISTJANSSON, J.E.; EDWARDS, J.M.;  
 OA15.2-009 MITCHELL, D.L.  
 Impact of a new parameterization scheme for  
 non-spherical ice crystals of the climates of two  
 GCMs  
 OA301 RAABE, A.; JAGUSCH, F.; MÖLDERS, N.  
 OA15.2-010 Different cloud prediction by use of various  
 types of cloud models included in one mesoscale  
 model  
 OA302 MELIKECHI, A.; SCHAYES, G.  
 OA15.2-011 Diurnal variations in stratocumulus-capped  
 atmospheric boundary layer

## OA15 Clouds and their impact on radiation and photo-chemical processes .3 Radiative transfer and budget

Convener: Ohmura, A.  
**Thursday, 23 April 1998**  
 Lecture Room: THALIE  
 Chairperson: Ohmura, A.  
 Editor: Ohmura, A.

14:00 MACKE, A.  
 OA15.3- Monte Carlo radiative transfer calculations for  
 001 inhomogeneous mixed phase clouds  
 14:15 DI GIUSEPPE, F.; RIZZI, R.  
 OA15.3- Far-infrared scattering effects in cloudy sky  
 002  
 14:30 HOLLMANN, R.; MÜLLER, J.; STUHLMANN, R.  
 OA15.3- Radiation budget for BALTEX  
 003  
 14:45 SZCZAP, F.; ISAKA, H.; SAUTE, M.  
 OA15.3- The heterogeneity of clouds and their influence on  
 004 their radiative properties  
 15:00 SZCZAP, F.; ISAKA, H.; SAUTE, M.  
 OA15.3- The anomalous absorption phenomenon of heteroge-  
 005 neous clouds  
 15:15 MARSHAK, A.; DAVIS, A.; WISCOMBE, W.;  
 OA15.3- CAHALAN, R.  
 006 Biases in shortwave column absorption in the pres-  
 ence of fractal clouds  
 15:30 BERGER, F.H.  
 OA15.3- Heating rates in five atmospheric layers for selected  
 007 cloud cases in Europe  
 15:45 BURNET, F.; BRENGUIER, J.-L.  
 OA15.3- Validation of droplet spectra and liquid water con-  
 008 tent measurements  
 16:00 REICHARDT, J.; WEITKAMP, C.; NEIDHART,  
 OA15.3- B.  
 009 Optical and geometrical properties of northern  
 midlatitude cirrus clouds observed with a UV raman  
 lidar



16:15 **WILD, M.; OHMURA, A.**

OA15.3-010 The role of the cloud-free atmosphere in the problem of underestimated absorption of solar radiation in GCM atmospheres

16:30 END OF SUB-SESSION

### **OA15 Clouds and their impact on radiation and photo-chemical processes .3 Radiative transfer and budget - Poster Session**

Convener: Ohmura, A.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: LES MUSES

Chairperson: Ohmura, A.

Editor: Ohmura, A.

OA303 DI GIUSEPPE, F.; MANNOZZI, L.; RIZZI, R.

OA15.3-011 Cirrus cloud optical properties in the far infrared

OA304 PERSSON, T.

OA15.3-012 Solar radiation climate in Sweden

OA305 KACZOROWSKA, R.; MAGER, P.; FARAT, R.

OA15.3-013 Assessment of Poland overall cloudiness as the reason for the forecasting of possible climate changes

### **OA15 Clouds and their impact on radiation and photo-chemical processes .4 Photo-chemical processes in clouds - Poster Session**

Convener: Flossmann, A.I.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: LES MUSES

Chairperson: Flossmann, A.I.

Editor: Flossmann, A.I.

OA306 OZOLIN, Y.E.; KAROL, I.L.; OZHIGINA, N.A.; ROZANOV, E.V.

OA15.4-007 Numerical study of chemical species evolution in a convective cloud

OA307 LANDGRAF, J.; TRAUTMANN, T.; BRÜHL, C.

OA15.4-008 Effects of clouds on OH production in multiple cloud layers and broken clouds

### **OA15 Clouds and their impact on radiation and photo-chemical processes .4 Photo-chemical processes in clouds**

Convener: Flossmann, A.I.

Friday, 24 April 1998

Lecture Room: THALIE

Chairperson: Flossmann, A.I.

Editor: Flossmann, A.I.

08:30 LOSNO, R.

OA15.4-001 A model describing trace metals acting as catalyst in a marine cloud

08:45 GUERINOT, G.; MARTINERIE, P.; LEGRAND, M.; CAUTENOT, S.

OA15.4-002 Model of biomass burning plume ageing

09:00 REESE, A.; HERRMANN, H.; ERVENS, B.;

OA15.4-003 ZELLNER, R.

Laboratory and modelling studies of tropospheric multiphase conversions involving some C<sub>1</sub> and C<sub>2</sub> peroxy radicals

09:15 HATZIANASTASSIOU, N.; FLOSSMANN, A.I.;

OA15.4-004 WOBROCK, W.

Study of the indirect effect of aerosol particles during repeated cloud cycles

09:30 ARIYA, P.A.; SANDER, R.; CRUTZEN, P.J.

OA15.4-005 Sulfur (IV) to sulfur (VI) dark conversion mechanisms: a modelling study

09:45 TRAUTMANN, T.; LANDGRAF, J.; PODGORNÝ, J.

OA15.4-006 Actinic flux computation for finite and broken clouds in absorbing and scattering atmospheres

10:00 END OF SUB-SESSION

### **OA16 Interaction of biogenic and anthropogenic compounds in the Mediterranean and its influence on atmospheric chemistry I**

Convener: Seufert, G.

Co-Convener(s): Hewitt, N.

Monday, 20 April 1998

Lecture Room: CLIO

Chairperson: Seufert, G.

Editor: Seufert, G.

14:00 GUENTHER, A.; BAUGH, B.; GREENBERG, J.;

OA16-001 HARLEY, P.; KLINGER, L.

Land use change and biogenic hydrocarbon emissions from Mediterranean and Savanna landscapes (Solicited Paper)

14:30 LOPEZ, A.; ANASTASIO, N.; ATTIE, J.L.;

OA16-002 BRUSTET, J.M.; DURAND, P.; FONTAN, J.;

PONT, V.  
Study of matter and energy transfers by airplane measurements during the BEMA campaign (Burriana - Spain)

14:45 CIESLIK, S.; DUTAU, L.; LARSEN, B.;

OA16-003 DARMAIS, S.; SIMON, V.; TORRES, L.

Comparison of two flux measurement techniques for biogenically emitted VOC

15:00 JENSEN, N.O.; COURTNEY, M.;

OA16-004 HUMMELSHOEJ, P.; CHRISTENSEN, C.S.;

LARSEN, B.R.

A REA system for measurements of VOC fluxes

15:15 CICCIOI, P.; SEUFERT, G.; VALENTINI, R.

OA16-005 Assessment of primary and secondary biogenic compounds in emission fluxes from an orange field near Burriana, Spain

15:30 SCHAAB, G.; LENZ, R.; SHARMA, M.

OA16-006 A temporal-spatial solar radiation model to drive biogenic emissions from sparse vegetation and over complex terrain

15:45 KESSELMEIER, J.; STAUDT, M.; WOLF, A.;

OA16-007 SEUFERT, G.; BERTIN, N.; HANSEN, U.;

CICCIOI, P.; BRANCALEONI, E.; FRATTONI, M.; TORRES, L.; LUCHETTA, L.; SIMON, V.

Enclosure approaches for the determination of terpenoid emissions from vegetation

16:00 HANSEN, U.; SEUFERT, G.

OA16-008 Terpenoid emission from Citrus Sinensis (L.) Osbeck under drought stress

16:15 **STAUDT, M.**; BERTIN, N.; FRENZEL, B.;  
 OA16- SEUFERT, G.  
 009 Seasonal changes in amount and composition of  
 monoterpenes emitted by young *Pinus pinea* trees  
 16:30 END OF PART I  
 17:00 Opening  
 19:30 Reception

## OA16 Interaction of biogenic and anthropogenic compounds in the Mediterranean and its influence on atmospheric chemistry II

Convener: Seufert, G.  
 Co-Convener(s): Hewitt, N.  
**Tuesday, 21 April 1998**  
 Lecture Room: CLIO  
 Chairperson: Ciccioli, P.  
 Editor: Ciccioli, P.

08:30 **CUVELIER, C.**; THUNIS, P.  
 OA16- Application of the mesoscale meteorology-chemistry  
 010 model TVM-LCC/RACM to the study of biogenic  
 emissions  
 08:45 **HJORTH, J.**; HORIE, O.; JENSEN, N.R.;  
 OA16- LARSEN, B.R.; NEEB, P.; PLAGENS, H.;  
 011 SPITTLER, M.; RUPPERT, L.; VAN DINGENEN,  
 R.; VIRKKULA, A.; WINTERHALTER, R.;  
 WIRTZ, K.  
 A smog chamber study on the formation of aerosol  
 and gaseous products by the photo-oxidation of  
 monoterpenes  
 09:00 **BONSANG, B.**; KANAKIDOU, M.;  
 OA16- MIHALOPOULOS, N.; KAVOURAS, H.;  
 012 STEPHANOU, E.; PIO, C.; NUNES, T.; CELIA, A.;  
 GOMES, P.; SEAKINS, P.; LEWIS, A.;  
 HARISSON, D.; BOISSARD, C.; GROS, V.;  
 SANAK, J.  
 Field observation and modelling of the formation of  
 biogenic organic aerosols in Mediterranean areas  
 09:15 **SIMEONIDIS, P.**; SANIDA, G.; ZIOMAS, I.;  
 OA16- KOURTIDIS, K.  
 013 A biogenic VOC emissions inventory for Greece  
 09:30 **LAURILA, T.**; HAKOLA, H.; LINDORS, V.  
 OA16- Biogenic VOCs in continental northern Europe -  
 014 concentrations and photochemistry  
 09:45 **HEIDEN, A.C.**; KLEY, D.; SCHUH, G.; **WILDT,**  
 OA16- **J.**  
 015 Monoterpene emissions from rape: limitation by  
 DMAPP/IPP availability

### 10:00 Poster Summaries

OA16- **STEINBRECHER, R.**; SEUFERT, G.; DUERR, M.;  
 016 **HAUFF, K.**; ROESSLER, J.  
 Monoterpene emission from soils in orange planta-  
 tions in the Valencian citrus belt, Spain  
 OA16- **MANES, F.**; SEUFERT, G.; VITALE, M.;  
 017 **DONATO, E.**; CSIKY, O.; SILLI, V.  
 Ecophysiological characterization of *Citrus Sinensis*  
 (L.) Osbeck and relationships with type and amount  
 of biogenic emissions  
 OA16- **STAUDT, M.**; WOLF, A.; KESSELMEIER, J.  
 018 Effect of light and temperature on the exchange of  
 gaseous formic and acetic acid from orange foliage  
 (*Citrus Sinensis* L.)

OA16- **ALVES, C.**; PIO, C.; DUARTE, A.  
 019 The organic composition of air particulate matter  
 from semi-rural and forest Portuguese areas  
 OA16- **HAKOLA, H.**; RINNE, J.; LAURILA, T.  
 020 Seasonal variation of the VOC emission rates of  
 boreal broad-leaved trees  
 OA16- **RINNE, J.**; HAKOLA, H.; LAURILA, T.  
 021 Vertical fluxes of monoterpenes above a Scots pine  
 in the boreal vegetation zone  
 OA16- **WINTERHALTER, R.**; NEEB, P.; MOORTGAT,  
 022 G.K.  
 Aerosol formation in gas-phase monoterpene ozonol-  
 ysis at near-atmospheric concentration  
 OA16- **RAPPENGLÜCK, B.**; FABIAN, P.  
 023 Observations of biogenic and anthropogenic NMHC  
 in Athens during the PAUR campaign  
 OA16- **WILSKE, B.**; KESSELMEIER, J.  
 024 The C<sub>1</sub>- and C<sub>2</sub>- organic acid and aldehyd exchange  
 of lichens in the boreal zone of Europe  
 OA16- **BOMBOI-MINGARRO, M.T.**; BRAVO, I.;  
 025 **COSIN, S.**; GARCIA, S.; PEREZ-PASTOR, R.;  
 PEREZ, M.A.; SANZ, M.J.  
 Seasonal changes in AVOCs-BVOCs and volatile  
 carbonyl air concentrations in the Castellon plain  
 during 1997  
 OA16- **ECKERT, S.**; STÜDEMANN, O.  
 026 A conceptional model to assess biogenic and anthro-  
 pogenic ozone forming potentials for Mecklenburg-  
 Vorpommern, Germany  
 10:30 END OF SESSION

## OA16 Interaction of biogenic and anthropogenic compounds in the Mediterranean and its influence on atmospheric chemistry - Poster Session

Convener: Seufert, G.  
 Co-Convener(s): Hewitt, N.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
 Poster Area: LES MUSES  
 Chairperson: Seufert, G.  
 Editor: Seufert, G.

OA329 **STEINBRECHER, R.**; SEUFERT, G.; DUERR,  
 M.; HAUFF, K.; ROESSLER, J.  
 OA16-016 Monoterpene emission from soils in orange  
 plantations in the Valencian citrus belt, Spain  
 OA330 **MANES, F.**; SEUFERT, G.; VITALE, M.;  
 OA16-017 **DONATO, E.**; CSIKY, O.; SILLI, V.  
 Ecophysiological characterization of *Citrus*  
*Sinensis* (L.) Osbeck and relationships with type  
 and amount of biogenic emissions  
 OA331 **STAUDT, M.**; WOLF, A.; KESSELMEIER, J.  
 OA16-018 Effect of light and temperature on the exchange  
 of gaseous formic and acetic acid from orange  
 foliage (*Citrus Sinensis* L.)  
 OA332 **ALVES, C.**; PIO, C.; DUARTE, A.  
 OA16-019 The organic composition of air particulate matter  
 from semi-rural and forest Portuguese areas  
 OA333 **HAKOLA, H.**; RINNE, J.; LAURILA, T.  
 OA16-020 Seasonal variation of the VOC emission rates of  
 boreal broad-leaved trees  
 OA334 **RINNE, J.**; HAKOLA, H.; LAURILA, T.  
 OA16-021 Vertical fluxes of monoterpenes above a Scots  
 pine in the boreal vegetation zone

- OA335 **WINTERHALTER, R.**; NEEB, P.;  
OA16-022 **MOORTGAT, G.K.**  
Aerosol formation in gas-phase monoterpene  
ozonolysis at near-atmospheric concentration
- OA336 **RAPPENGLÜCK, B.**; FABIAN, P.  
OA16-023 Observations of biogenic and anthropogenic  
NMHC in Athens during the PAUR campaign
- OA337 **WILSKE, B.**; KESSELMEIER, J.  
OA16-024 The C<sub>1</sub>- and C<sub>2</sub>- organic acid and aldehyd ex-  
change of lichens in the boreal zone of Europe
- OA338 **BOMBOI-MINGARRO, M.T.**; BRAVO, I.;  
OA16-025 **COSIN, S.**; GARCIA, S.; PEREZ-PASTOR, R.;  
**PEREZ, M.A.**; SANZ, M.J.  
Seasonal changes in AVOCs-BVOCs and volatile  
carbonyl air concentrations in the Castellon plain  
during 1997
- OA339 **ECKERT, S.**; STÜDEMANN, O.  
OA16-026 A conceptional model to assess biogenic and  
anthropogenic ozone forming potentials for  
Mecklenburg-Vorpommern, Germany

## **OA17 Climate variability: models and obser- vations (co-sponsored by SE)**

Convener: Komen, G.J.  
**Tuesday, 21 April 1998**  
Lecture Room: EUTERPE  
Co-sponsored by: Euroclivar  
Chairperson: Komen, G.J.

- 14:00 **LATIF, M.**  
European and Atlantic climate variability (Solicited  
Paper)
- 14:30 **SLINGO, J.M.**  
Scale interactions and global teleconnection patterns  
(Solicited Paper)
- 15:00 **JOHNS, T.C.**  
Climate change prediction and detection using  
coupled climate models within Europe (Solicited  
Paper)
- 15:30 **DUPLESSY, J.-C.**  
Climate variability deduced from the modern and  
paleoclimatic records (Solicited Paper)
- 16:00 **LE TREUT, H.**  
Climate models: current uncertainties and future  
prospects (Solicited Paper)
- 16:30 **END OF SUB-SESSION**

## **OA17 Climate variability: models and obser- vations (co-sponsored by SE)** **.1 West African monsoon studies**

Convener: Thorncroft, C.D.  
**Monday, 20 April 1998**  
Lecture Room: EUTERPE  
Chairperson: Thorncroft, C.D.

- 08:30 **THORNCROFT, C.**  
Introduction
- 08:45 **POCCARD, I.**; JANICOT, S.; RICHARD, Y.  
Interannual variability of SST - tropical circulation  
relationship on the period 1968-1997: focus on West  
Africa

- 09:00 **TRZASKA, S.**; JANICOT, S.; FONTAINE, B.  
Numerical study of the impact of ENSO and decadal  
scale SST variability on Sahel rainfall
- 09:15 **XUE, Y.**; CLARK, D.B.; HARDING, R.J.  
Mechanisms of West African monsoon and land  
surface process interaction
- 09:30 **FINK, A.H.**; SPETH, P.  
Variability of the West African monsoon on  
intraseasonal and interannual time scales
- 09:45 **EVANS, A.D.L.**; HARRISON, M.S.J.  
Simulation and prediction of the west African  
monsoon
- 10:00 **COOK, K.H.**  
Large-scale dynamics and the West African monsoon
- 10:15 **THORNCROFT, C.**; BLACKBURN, M.  
Maintenance of the African easterly jet
- 10:30 **BREAK**

Chairperson: Thorncroft, C.D.

- 11:00 **PYTHAROULIS, I.**; THORNCROFT, C.D.  
On the existence of warm core African easterly  
waves
- 11:15 **XU, K.-M.**; RANDALL, D.A.  
Roles of cumulus convection in the Atlantic easterly  
waves
- 11:30 **DIONGUE, A.**; LAFORE, J.P.; REDELSPERGER,  
J.L.  
Numerical study of interactions between a squall-line  
and an easterly wave
- 11:45 **PARKER, D.**  
Propagation of the mesoscale storm flow of West  
African squall lines
- 12:00 **TAUPIN, J.-D.**  
Decadal sahelian rainfall estimation over an area of  
1 degree square: characterization of the "Ground  
Truth" according to the raingauge network density
- 12:15 **MATHON, V.**; LAURENT, H.  
Automatic tracking of West African cloud clusters
- 12:30 **JANICOT, S.**; DIEDHIOU, A.  
Interannual variability of intraseasonal and synoptic  
weather systems over West Africa on the period  
1968-1997
- 12:45 **LEBEL, T.**; AMANIL, A.; LE BARBE, L.  
Rainfall variability in the Sahel: a matter of scales
- 13:00 **END OF SUB-SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

## **OA17 Climate variability: models and obser- vations (co-sponsored by SE)** **.1 West African monsoon studies - Poster Session**

Convener: Thorncroft, C.D.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: LES MUSES  
Chairperson: Thorncroft, C.D.

- OA171 **DELCLAUX, F.**; POLCHER, J.; LEBEL, T.  
Rain event climatology in West Africa: compari-  
son from in situ and GCM outputs

- OA173 TAUPIN, J.-D.  
Characterization of sahelian rainfall spatial variability at a scale between 1 and 10 kilometres: the ARCOL experiment (region of Niamey, Niger)
- OA174 THORNCROFT, C.  
The West African Monsoon Project \*
- OA175 DIEDHIOU, A.; JANICOT, S.; VILTARD, A.; DE FELICE, P.; LAURENT, H.  
Different regimes of easterly waves over West Africa and tropical Atlantic (1979-1995)

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.2 Natural climate variability on the basis of past observations - Poster Session**

Convener: Duplessy, J.-C.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: LES MUSES

- OA177 MIHAJLOVIC, LJ.; MIHAJLOVIC, S.; ORBADOVIC, M.  
Dynamically characteristics of the atmosphere parameters during intensive magnetic storms
- OA178 OTTERMAN, J.; ATLAS, R.; ANGELL, J.; ANYAMBA, E.; ARDIZZONE, J.; STARR, D.; SUSSKIND, J.; TERRY, J.  
1997 temperatures are highest on record: should it be attributed to the global warming?
- OA179 DACAMARA, C.C.; TRIGO, R.M.  
Winter precipitation in Portugal: trends and variability using a linear model based on weather types
- OA180 VACCARO, L.; SIANI, A.M.; PILOZZI, A.; MANGIANI, F.; PALMIERI, S.  
An analysis of Italian long temperature and precipitation time series
- OA181 FAUQUETTE, S.; GUIOT, J.; SUC, J.-P.  
Pliocene warmth in Mediterranean areas: reconstruction from pollen data
- OA182 HEJKRLMK, L.  
Persistency of lunar signal in a precipitation data series
- OA183 RASPOPOV, O.M.; SHUMILOV, O.I.; KOCHEGURA, V.V.; DERGACHEV, V.A.; VAN GEEL, B.; VAN DER PLICHT, J.; RENSSSEN, H.  
External forcing of terrestrial climate during the Holocene around 2800 BP
- OA184 GIMENO, L.; RUA, A.; DE LA TORRE, L.; GONZALEZ, C.  
Climate variability in Orense (Spain) in the last 300 years
- OA185 IVANOVA, E.V.; IVANOV, V.V.  
The fine structure of the spectral maxima of variations of sea level, air pressure and air temperature for periods from several days to several months
- OA186 BRUZEK, V.  
Some causes of long-term meteorological element changes and their further development \*

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.2 Natural climate variability on the basis of past observations I**

Convener: Duplessy, J.-C.

Thursday, 23 April 1998

Lecture Room: EUTERPE

Chairperson: N.N.

- 14:00 PELTIER, W.R.; SAKAI, K.  
Dansgaard-Oeschger oscillations: a hydrodynamic theory (Solicited Paper)
- 14:30 REICHERT, B.K.; BENGTSSON, L.  
Combined dynamical and statistical modelling for the interpretation of in situ paleo records
- 14:45 GRIEGER, B.  
Glacial Atlantic surface temperatures based on new data and a semi-inverse ocean model
- 15:00 WYPUTTA, U.  
Sensitivity of the atmospheric general circulation model ECHAM 3 to different glacial sea surface temperatures
- 15:15 LERASLE, N.; DUPLESSY, J.C.  
Sea surface salinity reconstruction of the Indian Ocean during the last glacial maximum (about 18,000 yr B.P.)
- 15:30 CAMPIN, J.-M.; FICHEFET, T.; DUPLESSY, J.-C.  
A GCM simulation of the  $^{14}\text{C}$  distribution in the glacial ocean
- 15:45 TARASOV, P.E.; GUIOT, J.  
18 ka biomes reconstructed from pollen and plant macrofossil data from northern Eurasia: palaeoclimatic interpretation
- 16:00 PINOT, S.; RAMSTEIN, G.; MARSIAI, I.; PEYRON, O.; GUIOT, J.; DE VERNAL, A.; SEIDOV, D.  
Last glacial maximum model/data comparison over Europe
- 16:15 KISSEL, C.; LAJ, C.; ELLIOT, M.; LABEYRIE, L.  
Rapid climatic variations and magnetic mineralogy changes in North Atlantic sediments
- 16:30 LAJ, C.; KISSEL, C.; AUFFRET, G.; VANGRIESHEM, A.  
Changes in the strength of the Iceland-Scotland overflow water in the last 200,000 years: evidence from magnetic anisotropy analysis of core SU90-33
- 16:45 VIMEUX, F.; MASSON, V.; JOUZEL, J.; STIEVENARD, M.; PETIT, J.R.  
Variations of the deuterium excess over the last climatic cycle in the Vostok ice core
- 17:00 END OF PART I

---

**Journal of Atmospheric Chemistry**

an official journal of the EGS for the publication of your original research

---

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.2 Natural climate variability on the basis of past observations II**

Convener: Duplessy, J.-C.

Friday, 24 April 1998

Lecture Room: EUTERPE

Chairperson: Grieger, B.

09:00 **ROUSSEAU, D.D.**; PREECE, R.; LIMONDIN-LOZOUET, N.

Late glacial and holocene climatic history in Great Britain from land snail assemblages

09:15 **COLIN, C.**; KISSEL, C.; BLAMART, D.; TURPIN, L.

Rapid climatic events and Asian monsoon intensity: magnetic and geochemical results from the Bay of Bengal and the Andaman Sea

09:30 **MARTI, O.**; BRACONNOT, P.; JOUSSAUME, S.

African and Asian monsoon changes at 6000 BP inferred from a full coupled ocean-atmosphere model

09:45 **PEYRON, O.**; BONNEFILLE, R.; JOLLY, D.; GUIOT, J.

Climatic reconstruction in east Africa for 6000 years b.p. from Pollen data

10:00 **MÖRNER, N.-A.**

Climatic changes in the last millennium

10:15 **JACOBET, J.**; BECK, C.; PHILIPP, A.

North-Atlantic-European atmospheric circulation changes between the early instrumental period and the recent century

10:30 BREAK

Chairperson: N.N.

11:00 **WEBER, S.L.**; **SHABALOVA, M.V.**

Seasonality of low-frequency variability in early-instrumental temperatures

11:15 **BORN, K.**

Changes in baroclinicity and synoptic activity on the northern hemisphere from the 1960s to the present as seen by distinct data sets

11:30 **BASNETT, T.A.**; RAYNER, N.A.; PARKER, D.E.

GMSLP3: a global mean sea level pressure dataset

11:45 **QIAN, B.**; CORTE-REAL, J.; XU, H.

Nonseasonal variability of large-scale precipitation over Europe

12:00 **RAYNER, N.A.**; SMITH, T.M.

Global and regional optimal averages and associated error estimates of annual observed surface temperature anomaly

12:15 **SCHMITT, F.**

Multifractal "natural climate variability"

12:30 END OF SESSION

---

**Attend the Poster Session**

---

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.3 Climate variability: time scale interactions I**

Convener: Slingo, J.M.

Wednesday, 22 April 1998

Lecture Room: EUTERPE

Chairperson: Slingo, J.M.

Coupled processes and global teleconnections

08:30 **BLADE, I.**

The influence of midlatitude ocean/atmosphere coupling on the low-frequency variability of a GCM with tropical SST forcing (Solicited Paper)

09:00 **DOMMENGET, D.**; LATIF, M.

Time scale interactions of SST variability in different GCM simulations

09:15 **KATTENBERG, A.**; DRIJFHOUT, S.S.

The role of the oceans in coupled model climate variability

09:30 **NORTON, W.A.**; JEWSON, S.P.; SUTTON, R.T.; JONES, C.G.

On the influence of North Atlantic SST anomalies on the atmosphere

09:45 **MARTINEU, C.**; PARÉY, S.

Relations between NAO, PNA and ENSO oscillations in seasonal winter simulations with four AGCMs

10:00 **MARQUET, P.**

Seasonal forecasts with a coupled AOGCM

10:15 **AUAD, G.**; MILLER, A.J.; WHITE, W.B.

Simulation of interdecadal heat storages and heat budgets in the upper 400 m of the Pacific Ocean

10:30 **JONES, C.G.**; THORNCROFT, C.D.

Assessing the influence of ENSO forcing on synoptic activity in the tropical Atlantic

Stability and variability of the climate system

10:45 **BATES, J.R.**

A dynamical stabilizer in the climate system: a mechanism suggested by a simple model (Solicited Paper)

11:15 **DRIJFHOUT, S.**; HAARSMA, R.J.

The influence of solar variability on the variability of the climate system

11:30 **PELLETIER, J.D.**

Natural climate variability on all time scales from a stochastic atmosphere-ocean model

11:45 **SCHÄR, C.**; LÜTHI, D.; BEYERLE, U.; HEISE, E.

The soil-precipitation feedback: a study with a regional climate model

12:00 LUNCH

12:00 Business Meetings

Chairperson: Bladé, I.

Scale interactions and ENSO dynamics

14:00 **VAN OLDENBORGH, G.J.**

Tracking down the causes of the 1997 El Nino with an adjoint OGCM

- 14:15 BALMASEDA, M.; ALVES, J.; ANDERSON, D.; FERRANTI, L.; SEGSCHNEIDER, J.; STOCKDALE, T.  
Do westerly wind bursts limit ENSO predictability?
- 14:30 VIALARD, J.; DELECLUSE, P.  
Vesterly wind bursts and trigering of ENSO
- 14:45 BENESTAD, R.E.; SUTTON, R.T.; ANDERSON, D.L.T.  
Intraseasonal Kelvin waves in the tropical Pacific
- 15:00 FINK, A.H.; SPETH, P.; VINCENT, D.G.; SCHRAGE, J.M.  
High and low frequency intraseasonal variance of OLR on annual and ENSO time scales
- 15:15 SLINGO, J.M.; ROWELL, D.P.; SPERBER, K.R.  
On the predictability of interannual variations in the activity of the Madden Julian Oscillation
- 15:30 GUALDI, S.; NAVARRA, A.; TINARELLI, G.  
The interannual variability of the Madden-Julian oscillation in an ensemble of GCM experiments
- 15:45 VAN DER VAART, P.C.; DIJKSTRA, H.A.; JIN, F.F.  
The Pacific cold tongue and the ENSO mode in a fully coupled Zebiak-Cane model
- 16:00 BOULANGER, J.-P.; MENKES, C.  
On long equatorial wave reflection
- 16:15 RAYNAUD, S.; SPEICH, S.; MADEC, G.  
Interannual variability of the ocean-atmosphere system through global general circulation model results: the Pacific Ocean
- 16:30 END OF PART I

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.3 Climate variability: time scale interactions - Poster Session**

Convener: Slingo, J.  
 Display Time: Monday, 09:00 - Friday, 13:00  
 Authors in Attendance: Wednesday, 17:00 - 19:00  
 Poster Area: LES MUSES

- OA187 CASTANHEIRA, J.M.; DACAMARA, C.C.; ROCHA, A.  
Global circulation patterns associated with atmospheric forcing by sea surface temperature
- OA188 ROCHA, A.; BELO, M.  
The ENSO signature on winter rainfall over the Iberian Peninsula
- OA189 ALEXEEV, V.A.; BATES, J.R.  
Sensitivity of the climate of a GCM to the boundary layer parameterizations
- OA190 LORANT, V.; ROYER, J.-F.  
Sensitivity to resolution studied with a variable horizontal resolution global circulation model
- OA191 PRIGANCOVA, A.; PULAKOS, C.; PETROPOULOS, B.  
Some quantitative signatures of climate variability on time scales of solar forcing
- OA192 KURGANSKY, M.V.; PISNICHENKO, I.A.  
Modified Ertel's potential vorticity as a climate variable
- OA193 CABOS, W.; ORTIZ BEVIA, M.J.; JIMENEZ, J.J.  
Study of scale interaction in the anomalies equatorial Atlantic

- OA194 VAN EIJK, M.; BURGERS, G.; VAN OLDENBORGH, G.J.  
The implementation of a nonlocal diffusion model in the HOPE OGCM
- OA195 RAZORENOVA, O.A.  
Variability and interaction of the global atmosphere circulation forms over the Atlantic and European sectors of the northern hemisphere in winter
- OA196 MENDONCA LEITE, S.; ANDRADE SANTOS, J.  
Contribution to the analysis of Iberian Peninsula climate variability
- OA197 PEREIRA, M.G.; DACAMARA, C.C.  
Coupled modes of variability between surface temperature in Portugal, 500 hPa height and sea-level pressure
- OA198 CAMELO, L.; MANSO ORGAZ, M.D.  
A estudyn of hydrologic variability of Douro river basin
- OA199 TSCHUCK, P.; ARPE, K.  
A climatology of onset dates of the Asian summer monsoon
- OA200 CARL, P.  
A generically intraseasonal southern oscillation of the atmosphere-land system?
- OA201 TRZASKA, S.; RICHARD, Y.; ROUCOU, P.  
Numerical study of the impact of first eigenmodes of SST variability on tropical rainfall
- OA201A TIBALDI, S.; QUADRELLI, R.; CESARI, V.  
Influence of SST on observed midlatitude blocking variability

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.3 Climate variability: time scale interactions II**

Convener: Slingo, J.M.  
 Thursday, 23 April 1998  
 Lecture Room: EUTERPE  
 Chairperson: Fink, A.

European climate and the NAO

- 08:45 CESARI, V.; TIBALDI, S.; TOSI, E.  
Blocking simulation in general circulation models with different resolutions
- 09:00 MICHELANGELO, P.-A.; VAUTARD, R.  
The dynamics of Euro-Atlantic blocking onsets
- 09:15 BARTHOLY, J.; PONGRACZ, R.  
Comparing signals of ENSO and NAO for selected regions of the northern hemisphere
- 09:30 WEBER, R.O.; STEFANICKI, G.; TALKNER, P.  
Influence of NAO index to synoptic weather situation over Switzerland
- 09:45 PIRAZZOLI, P.A.; TOMASIN, A.  
The recent abatement of easterly winds in the northern Adriatic

\* not included in the Book of Abstracts

## Monsoons

- 10:00 **ANNAMALAI, H.**; SLINGO, J.M.  
The interaction between intraseasonal and interannual variability and its relevance for the seasonal predictability of the Asian summer monsoon (Solicited Paper)

10:30 **BREAK**

Chairperson: Slingo, J.M.

- 11:00 **CHAUVIN, F.**; ROYER, J.-F.; STEPHENSON, D.B.  
Role of Indian Ocean SSTs on the Asian summer monsoon
- 11:15 **ARPE, K.**; TSCHUCK, P.  
Impact of SST forcing on the monsoons of 1987/88
- 11:30 **SCONCIA, B.**; HOSKINS, B.  
Intraseasonal variability of the Indian monsoon
- 11:45 **GIORGETTA, M.A.**; BENGTSSON, L.; ARPE, K.  
QBO signals in the monsoon system in GCM experiments
- 12:00 **MAYNARD, K.**; POLCHER, J.; LAVAL, K.  
The role of land surface processes in interannual variability of the LMD GCM
- 12:15 **CARL, P.**  
On the modal structure of Indian monsoon onset
- 12:30 **JONES, C.**; WALISER, D.E.; SCHEMM, J.-K.E.; LAU, W.K.M.  
Prediction skill of the Madden-Julian oscillation in dynamical and statistical models\*
- 12:45 **END OF SUB-SESSION**

## OA17 Climate variability: models and observations (co-sponsored by SE) .4 Clouds in the climate system: observations and modelling

Convener: Desbois, M.  
**Monday, 20 April 1998**  
Lecture Room: EUTERPE  
Chairperson: Le Treut, H.  
Editor: Desbois, M.

- 14:00 **BERGER, F.H.**; ROCKEL, B.  
OA17.4-001 Comparisons of model generated fluxes with satellite inferred fluxes
- 14:15 **SEZE, G.**; VANBAUCE, C.; BURIEZ, J.C.; PAROL, F.; COUVERT, P.  
OA17.4-002 Cloud cover observed simultaneously from POLDER and METEOSAT
- 14:30 **PAWLOWSKA, H.**; BRENGUIER, J.-L.; SCHUELLER, L.  
OA17.4-003 Cloud microphysical and radiative properties
- 14:45 **PINCUS, R.**; MCFARLANE, S.A.; KLEIN, S.A.  
OA17.4-004 Cloud type and horizontal variability in marine boundary layers
- 15:00 **MATHIEU, A.**; SEZE, G.; GUERIN, C.; DUPUIS, H.; WEILL, A.  
OA17.4-005 Convective meso-scale boundary layer clouds structures during the SEMAPHORE campaign
- 15:15 **STANWAY, J.D.**; LOVEJOY, S.; SCHERTZER, D.  
OA17.4-006 Direct evidence for cloud cascade dynamics from planetary scales to 1 km

- 15:30 **WEBB, M.J.**  
OA17.4-007 Assessment of the simulation of clouds in the Hadley Centre Climate Model using satellite observations
- 15:45 **BAUER, H.-S.**; BENGTSSON, L.; FEICHTER, J.; STENDEL, M.  
OA17.4-008 Validation of cloud systems in the general circulation model ECHAM4 by using the nudging technique
- 16:00 **GELENNE, P.**; RICARD, J.L.  
OA17.4-009 Bomex 1D intercomparison: impact of the Parametrization of the shallow convection in the surface fluxes
- 16:15 **DALPANE, E.**; MANNOZZI, L.; TOSI, E.; RIZZI, R.  
OA17.4-010 A new parameterization of cloud properties and comparison of simulated and measured HIRS cloudy radiances
- 16:30 **DELOBBE, L.**; GALLEE, H.  
OA17.4-011 Simulation of marine stratocumulus evolution observed during ASTEX: comparison with observations and sensitivity studies
- 16:45 **XU, K.-M.**; RANDALL, D.A.  
OA17.4-012 A sensitivity study of radiative-convective equilibrium in the tropics with a convection-resolving model
- 17:00 **TOMPKINS, A.M.**; CRAIG, G.C.  
OA17.4-013 Timescales of variability in tropical radiative-convective equilibrium
- 17:15 **END OF SUB-SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

## OA17 Climate variability: models and observations (co-sponsored by SE) .4 Clouds in the climate system: observations and modelling - Poster Session

Convener: Desbois, M.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: LES MUSES  
Chairperson: Le Treut, H.  
Editor: Desbois, M.

- OA202 **DOUTRIAUX-BOUCHER, M.**; SEZE, G.  
OA17.4-014 Comparison of ISCCP C<sub>1</sub> and D1 cloud datasets
- OA203 **KERAMITSOGLOU, I.**; HARRIES, J.E.; FOOT, J.S.  
OA17.4-015 Studies of upper tropospheric humidity using airborne in-situ sensors
- OA204 **BIBIKOVA, T.N.**; ZHURBA, E.V.  
OA17.4-016 Cloud fields dynamics above the Crimea
- OA205 **MÄKELÄ, J.M.**; AALTO, P.; POHJA, T.; HAATAJA, J.; HARI, P.; VESALA, T.; BUZORIUS, G.; RANNIK, U.; KULMALA, M.  
OA17.4-017 Nanoparticle formation events at a boreal forest site
- OA206 **KARAVAEV, D.**; SHCHUKIN, G.; STASENKO, V.  
OA17.4-018 Multiwave active-passive sounding of atmospheric moisture

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.5 Prediction and detection of anthropogenic climate change**

Convener: Johns, T.C.

**Tuesday, 21 April 1998**

Lecture Room: EUTERPE

Chairperson: Johns, T.C.

- 08:30 **CROSSLEY, J.F.; POLCHER, J.**  
Quantifying the uncertainties due to landsurface schemes in climate change prediction
- 08:45 **GEDNEY, N.; VALDES, P.J.**  
Significance of rooting depth on climate change prediction
- 09:00 **DOUVILLE, H.; PLANTON, S.; ROYER, J.-F.; KERGOAT, L.; BETTS, R.**  
Regional impacts of the vegetation feedbacks in doubled CO<sub>2</sub> climate experiments
- 09:15 **PAWSON, S.; KODERA, K.; ET AL.**  
Performance of current climate-middle atmosphere models: results from the GRIPS initiative
- 09:30 **KECKHUT, P.; SCHMIDLIN, F.J.; HAUCHECORNE, A.; CHANIN, M.L.**  
Trend estimates from US rocketsonde stations at low latitudes (8°S-34°N), taking into account instrumental changes and natural variability
- 09:45 **BARFRED, M.**  
Detecting external forcings of the atmosphere using the ERA data set
- 10:00 **DE F. FORSTER, P.M.; CHRISTIDIS, N.**  
The effect of uncertainties in radiative forcing on surface temperature trend predictions
- 10:15 **PELLETIER, J.D.**  
Testing for global warming against stationary natural climate variability
- 10:30 **BREAK**

Chairperson: Johns, T.C.

- 11:00 **MATYASOVSKY, I.**  
Estimating climate trends by nonparametric regression
- 11:15 **STENDEL, M.; BENGTTSSON, L.**  
Recent temperature trends from surface observations, satellite data, reanalysis and GCMs
- 11:30 **SEXTON, D.M.H.; FOLLAND, C.K.**  
Comparison of atmosphere model and coupled model climate change detection estimates
- 11:45 **BOVILLE, B.A.; KIEHL, J.T.; MEEHL, G.A.; SOLOMON, S.; PORTMANN, R.**  
Response of the NCAR Climate System Model to changing greenhouse gases
- 12:00 **CORTI, S.; MOLTENI, F.**  
Variations in hemispheric air-surface temperature associated with large scale flow patterns
- 12:15 **DUBROVSKY, M.; HUTH, R.**  
Circulation modes and their interdiurnal variability in the ECHAM GCM
- 12:30 **ULBRICH, U.; CHRISTOPH, M.**  
Simulated changes in baroclinic wave activity over the Atlantic: a NAO variability effect
- 12:45 **COLLINS, M.; TETT, S.F.B.**  
Possible changes in El Nino/southern oscillation in a warmer climate
- 13:00 **END OF SUB-SESSION**

**OA17 Climate variability: models and observations (co-sponsored by SE)**  
**.5 Prediction and detection of anthropogenic climate change - Poster Session**

Convener: Johns, T.C.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Wednesday, 17:00 - 19:00**

Poster Area: LES MUSES

- OA208 **KALVOVA, J.; JURECKOVA, J.; PICEK, J.**  
Nonparametric test of Ar order with application to the GCM-simulated and measured air temperatures
- OA209 **FERRARESE, S.; ALBERTO, D.; CASSARDO, C.; LONGHETTO A.**  
A study for the identification of CO<sub>2</sub> source areas
- OA210 **RIVIN, I.**  
A simplified 3D atmospheric model of relevance to interannual and interdecadal climate variability in the Pacific
- OA211 **BETHOUX, J.P.; GENTILI, B.**  
Mediterranean Sea: increase in greenhouse effect, air and sea temperatures and freshwater deficit
- OA212 **LOWE, J.A.; GREGORY, J.M.**  
Sea level rise: HadCM2 model predictions
- OA213 **DURMAN, C.F.; GREGORY, J.M.; GEORGE, S.E.; HENNESSY, K.J.**  
Changes in extreme daily precipitation by general circulation models under scenarios of increased CO<sub>2</sub> concentration
- OA214 **KHUNDZHUA, G.G.; ANDREEV, E.G.; AKSENOV, V.N.; KARAVAEVA, E.V.; SMIRNOVA, YU.G.**  
Whether the global warming can be avoided according to the "iron theory" of Dr. J. Martin?
- OA215 **POLCHER, J.; CROSSLEY, J.F.**  
The impact of a complex land-surface scheme on the results of a climate change simulation
- OA216 **FAIRHEAD, L.; DUFRESNE, J.-L.; LETREUT, H.; LI, L.**  
Climate change due to a CO<sub>2</sub> increase as simulated by the IPSL coupled model

**OA18 Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere (co-sponsored by ST) I**

Convener: Platt, U.

Co-Convener(s): Moortgat, G.K.

**Thursday, 23 April 1998**

Lecture Room: CLIO

Chairperson: Herrmann, H.

Field measurements

- 14:00 **BARRIE, L.A.**  
An overview of observations related to polar tropospheric ozone depletion chemistry (Solicited Paper)
- 14:30 **ARNOLD, T.; MARTINEZ, M.; PERNER, D.; CROWLEY, J.N.**  
Chlorine and bromine detectoin during arctic ozone depletion events at Ny-Ålesund

OA



- 14:50 **WITTROCK, F.**; RICHTER, A.; BURROWS, J.P.  
DOAS UV/visible measurements at Ny-Ålesund  
1995-1997: retrieval of tropospheric constituents
- 15:10 **LEHRER, E.**; KÖNIG-LANGLO, G.;  
LANGENDÖRFER, U.; MINIKIN, A.;  
TUCKERMANN, M.; UNOLD, W.;  
WAGENBACH, D.; PLATT, U.  
Tropospheric ozone depletion and related halogen  
chemistry at polar regions
- 15:30 **RAMACHER, B.**; KOPPMANN, R.; RUDOLPH,  
J.  
A novel approach to derive integrated halogen atom  
concentrations from changes in VOC pattern during  
tropospheric ozone depletions
- 15:50 **ARIYA, P.A.**; HOPPER, J.F.; HARRIS, G.W.  
C<sub>2</sub>-C<sub>7</sub> hydrocarbon concentration in Arctic snowpack  
interstitial air
- 16:10 Poster summaries of 3 min per summary

**STURGES, W.T.**; BAKER, J.M.; SUGIER, J.;  
SUNNENBERG, G.; CARPENTER, L.; LOVETT,  
A.; PENKETT, S.A.

Emission of reactive organochlorines and  
organobromines from coastal macrophytes

**MIHELE, C.M.**; IMPEY, G.; BARRIE, L.;  
ANLAUF, K.; SHEPSON, P.B.; HASTIE, D.R.

Bromine radicals and photolysable halogen com-  
pounds during polar sunrise at Alert, Canada

**AMMANN, M.**; WACHSMUTH, M.;  
BALTENSBERGER, U.; JOST, D.T.; GÄGGELER,  
H.W.

A new laboratory approach to heterogeneous halogen  
chemistry

**BEHR, P.**; **BREIL, M.**; ZELLNER, R.

Laboratory studies of the uptake of atmospheric trace  
gases on solid surfaces

**ADAMS, J.**; FICKERT, S.; MOORTGAT, G.K.;  
CROWLEY, J.N.

Activation of halogens via HOBr in the marine  
boundary layer - a laboratory study

**BAUER, D.**; INGHAM, T.; CAMPUZANO-JOST,  
P.; CARL, S.A.; MOORTGAT, G.K.; CROWLEY,  
J.N.

Gas-phase kinetics and photochemistry of bromine  
and iodine containing species in the marine boundary  
layer

**BEDJANIAN, YU.**; POULET, G.; LE BRAS, G.  
Reactions of bromine atoms with alkenes: kinetics  
and mechanisms at low pressure

**MÖSSINGER, J.**; SHALLCROSS, D.E.; COX,  
R.A.

UV-visible absorption cross-sections and atmospheric  
lifetimes of CH<sub>2</sub>Br<sub>2</sub>, CH<sub>2</sub>I<sub>2</sub> and CH<sub>2</sub>BrI

**FLEISCHMANN, O.C.**; ORPHAL, J.; BURROWS,  
J.P.

Spectroscopic and kinetical investigation on BRO  
applying static and time resolved rapid scan FT-UV  
spectroscopy

**BRÖSKE, R.**; ZABLE, F.

Spectroscopic and kinetic properties of XNO<sub>2</sub> (X =  
Br, I)

**SPIETZ, P.**; HIMMELMANN, S.; GROSS, U.;  
ORPHAL, J.; BURROWS, J.P.

Study of iodine oxides and iodine ozone chemistry  
using flash photolysis and time resolved absorption  
spectroscopy

**CANOSA-MAS, C.E.**; FLUGGE, M.; SHAH, D.;  
**VIPOND, A.**; WAYNE, R.P.

Kinetic studies of the reactions of the IO radical  
with itself, O(<sup>3</sup>P) and HO<sub>2</sub>

**CANOSA-MAS, C.E.**; COTTER, E.; STEWART,  
D.; **THOMPSON, K.**; WAYNE, R.P.

Laboratory kinetic studies of the reactions of Cl  
atoms with species of biogenic origin

**NOTARIO, A.**; BEDJANIAN, Y.; MELLOUKI, A.;  
LAVERDET, G.; LE BRAS, G.

The C<sub>1</sub> atom oxidation of isoprene studied in the  
laboratory

**BERHO, F.**; RAYEZ, M.-T.; LESCLAUX, R.;  
**VILLENAVE, E.**

The reaction of atomic chlorine with benzene  
KÖLM, J.; NELANDER, B.; SCHREMS, O.;  
BEICHERT, P.

Low temperature FTIR-studies and ab-initio calcula-  
tions of BrOBr and BrBrO

**LAZAROU, Y.G.**; KAMBANIS, K.G.;  
PAPAGIANNAKOPOULOS, P.

Theoretical ab-initio calculations of the structure and  
stability of halogen atoms adducts with alkyl halides

17:00 END OF PART I

## OA18 Heterogeneous and homogeneous chemistry of reactive halogen com- pounds in the lower troposphere (co-sponsored by ST) - Poster Session

Convener: Platt, U.

Co-Convener(s): Moortgat, G.K.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: LES MUSES

OA340 **STURGES, W.T.**; BAKER, J.M.; SUGIER, J.;  
SUNNENBERG, G.; CARPENTER, L.;  
LOVETT, A.; PENKETT, S.A.

Emission of reactive organochlorines and  
organobromines from coastal macrophytes

OA341 **MIHELE, C.M.**; IMPEY, G.; BARRIE, L.;  
ANLAUF, K.; SHEPSON, P.B.; HASTIE, D.R.

Bromine radicals and photolysable halogen  
compounds during polar sunrise at Alert, Canada

OA342 **AMMANN, M.**; WACHSMUTH, M.;

BALTENSBERGER, U.; JOST, D.T.;  
GÄGGELER, H.W.

A new laboratory approach to heterogeneous  
halogen chemistry

OA343 **BEHR, P.**; **BREIL, M.**; ZELLNER, R.

Laboratory studies of the uptake of atmospheric  
trace gases on solid surfaces

OA344 **ADAMS, J.**; FICKERT, S.; MOORTGAT, G.K.;  
CROWLEY, J.N.

Activation of halogens via HOBr in the marine  
boundary layer - a laboratory study

OA345 **BAUER, D.**; INGHAM, T.; CAMPUZANO-  
JOST, P.; CARL, S.A.; MOORTGAT, G.K.;  
CROWLEY, J.N.

Gas-phase kinetics and photochemistry of bro-  
mine and iodine containing species in the marine  
boundary layer

OA346 **BEDJANIAN, YU.**; POULET, G.; LE BRAS, G.  
Reactions of bromine atoms with alkenes: kinet-  
ics and mechanisms at low pressure

- OA347 **MÖSSINGER, J.**; SHALLCROSS, D.E.; COX, R.A.  
UV-visible absorption cross-sections and atmospheric lifetimes of  $\text{CH}_2\text{Br}_2$ ,  $\text{CH}_2\text{I}_2$  and  $\text{CH}_2\text{BrI}$
- OA348 **FLEISCHMANN, O.C.**; ORPHAL, J.; BURROWS, J.P.  
Spectroscopic and kinetical investigation on BRO applying static and time resolved rapid scan FT-UV spectroscopy
- OA349 **BRÖSKE, R.**; ZABLE, F.  
Spectroscopic and kinetic properties of  $\text{XNO}_2$  (X = Br, I)
- OA350 **SPIETZ, P.**; HIMMELMANN, S.; GROSS, U.; ORPHAL, J.; BURROWS, J.P.  
Study of iodine oxides and iodine ozone chemistry using flash photolysis and time resolved absorption spectroscopy
- OA351 **CANOSA-MAS, C.E.**; FLUGGE, M.; SHAH, D.; VIPOND, A.; WAYNE, R.P.  
Kinetic studies of the reactions of the IO radical with itself,  $\text{O}(^3\text{P})$  and  $\text{HO}_2$
- OA352 **CANOSA-MAS, C.E.**; COTTER, E.; STEWART, D.; THOMPSON, K.; WAYNE, R.P.  
Laboratory kinetic studies of the reactions of Cl atoms with species of biogenic origin
- OA353 **NOTARIO, A.**; BEDJANIAN, Y.; MELLOUKI, A.; LAVERDET, G.; LE BRAS, G.  
The  $\text{C}_1$  atom oxidation of isoprene studied in the laboratory
- OA354 **BERHO, F.**; RAYEZ, M.-T.; LESCLAUX, R.; VILLENAVE, E.  
The reaction of atomic chlorine with benzene
- OA355 **KÖLM, J.**; NELANDER, B.; SCHREMS, O.; BEICHERT, P.  
Low temperature FTIR-studies and ab-initio calculations of  $\text{BrOBr}$  and  $\text{BrBrO}$
- OA356 **LAZAROU, Y.G.**; KAMBANIS, K.G.; PAPAGIANNAKOPOULOS, P.  
Theoretical ab-initio calculations of the structure and stability of halogen atoms adducts with alkyl halides

## OA18 Heterogeneous and homogeneous chemistry of reactive halogen compounds in the lower troposphere (co-sponsored by ST) II

Convener: Platt, U.

Co-Convener(s): Moortgat, G.K.

Friday, 24 April 1998

Lecture Room: CLIO

Chairperson: N.N.

- 08:30 **WAGNER, T.**; PFEILSTICKER, K.; PLATT, U.  
GOME observation of enhanced tropospheric BrO concentration in the polar spring
- 08:50 **RICHTER, A.**; WITTROCK, F.; BURROWS, J.P.  
GOME measurements of tropospheric BrO in northern hemispheric spring
- 09:10 **ALICKE, B.**; HEBESTREIT, K.; PLATT, U.; CARPENTER, L.J.; STURGES, W.T.  
Measurements of tropospheric iodine oxide in the mid-latitudes

- 09:30 **CARPENTER, L.J.**; STURGES, W.T.; LISS, P.S.; PENKETT, S.A.; ALICKE, B.; HEBESTREIT, K.; PLATT, U.

Observations of alkyl iodides and bromides at Mace Heat: links to macroalgal emissions and io formation

- 09:50 **HEBESTREIT, K.**; STUTZ, J.; LURIA, M.; PELEG, M.; MATVEIV, V.; ROZEN, D.; PLATT, U.

First DOAS measurements of tropospheric BrO at mid latitudes: the Dead Sea Valley as a natural laboratory

10:10 BREAK

Chairperson: Seisel, S.

### Modelling of halogen activation

- 10:30 **SANDER, R.**; VON GLASOW, R.; CRUTZEN, P.J.; VOGT, R.

Modelling the chemistry of ozone and halogen compounds in the marine boundary layer (Solicited Paper)

- 11:00 **VOGT, R.**; SANDER, R.; CRUTZEN, P.J.

The chemistry of iodine in the marine boundary layer

- 11:20 **MCFIGGANS, G.**; ALLAN, B.; COE, H.; PLANE, J.M.C.; CARPENTER, L.; O'DOWD, C.D.; STURGES, W.O.

Observations and modelling studies of reactive iodine species in the marine boundary layer

- 11:40 **STUTZ, J.**; HEBESTREIT, K.; ALICKE, B.; PLATT, U.

Chemistry of halogen oxides in the troposphere: comparison of model calculations with recent field data

- 12:00 **EVANS, M.J.**; LAW, K.S.; SHALLCROSS, D.E.; BASSFORD, M.; SPAIN, T.G.; SIMMONDS, P.; PYLE, J.A.

Modelling of low ozone measured at the West Coast of Ireland

### Heterogeneous processes

- 12:20 **CROWLEY, J.N.**; FICKERT, S.; ADAMS, J.; BAUER, D.; INGHAM, T.

Reactive bromine in the marine boundary layer: laboratory studies of gas-phase and heterogeneous processes (Solicited Paper)

- 12:50 **OUM, K.W.**; LAKIN, M.J.; DEHANN, D.O.; BRAUERS, T.; STUTZ, J.; FINLAYSON-PITTS, B.J.

Formation of halogens from the heterogeneous reaction of sea salt

13:10 LUNCH

Chairperson: N.N.

- 14:00 **SCHWEITZER, F.**; GEORGE, CH.; MIRABEL, PH.

Multiphase phase chemistry of  $\text{XNO}_2$  and  $\text{HOBr}$  in relation to tropospheric halogen activation

- 14:20 **SEISEL, S.**; CALOZ, F.; FENTER, F.F.; AGUZZI, A.; MOCHIDA, M.; ROSSI, M.J.

Heterogeneous reactions of halogen containing trace gases on NaCl and KBr salt

- 14:40 **CHAIX, L.**; ROSSI, M.J.

Kinetics of the uptake of  $\text{D}_2\text{O}$  and  $\text{BrONO}_2$  on ice

OA

- 15:00 GERSHENZON, M.YU.; FEDOTOV, N.G.;  
ILAEIN, S.D.; APARINA, E.V.; ZELENOV, V.V.;  
GERSHENZON, YU.M.  
Mechanism of NO<sub>3</sub> uptake by solid NaCl
- 15:20 BREAK

Chairperson: N.N.

#### Heterogeneous and homogeneous Processes

- 15:40 HERMMANN, H.; REESE, A.; WICKTOR, F.;  
ERVENS, B.  
Mechanistic considerations for tropospheric halogen  
activation in the marine aerosol
- 16:00 BEHNKE, W.; ELEND, M.; KRÜGER, U.;  
ZETZSCH, C.  
Which components of the sea salt aerosol promote  
the Br-catalysed production of halogenated radicals?
- 16:20 DAVIES, J.A.; COX, R.A.  
Kinetics of the heterogeneous reaction of HNO<sub>3</sub> with  
NaCl: effect of water vapour
- 16:40 BLOSS, W.J.; ROWLEY, D.M.; COX, R.A.;  
JONES, R.L.  
Kinetic and photochemical studies of iodine oxide  
chemistry
- 17:00 ROWLEY, D.M.; MOSSINGER, J.; COX, R.A.  
The UV absorption cross-section and atmospheric  
photolysis rate of HOI
- 17:20 KAMBANIS, K.G.; LAZAROU, Y.G.;  
PAPAGIANNAKOPOULOS, P.  
Reaction rate and chemical mechanism for the gas  
phase reactions of Cl atoms with CH<sub>2</sub>ICl and CH<sub>2</sub>I<sub>2</sub>
- 17:40 Concluding remarks
- 18:00 END OF SESSION

### **OA19 Free-radicals in the troposphere (co-sponsored by ST)**

Convener: Dorn, H.-P.  
Co-Convener(s): Volz-Thomas, A.  
**Tuesday, 21 April 1998**  
Lecture Room: CLIO  
Chairperson: Monks, P.S.

#### NO<sub>3</sub> radicals

- 11:00 PLATT, U.  
The importance of nitrate radicals for atmospheric  
chemistry (Solicited Paper)
- 11:30 DUBOIS, R.; FLENTJE, H.  
Measurements of nitrate radicals and estimation of  
particle surface area at Cape Arkona (Rügen Island)
- 11:35 ALLAN, B.J.; COE, H.; MCFIGGANS, G.;  
PLANE, J.M.C.  
Studies of the nitrate radical in the troposphere

#### RO<sub>2</sub> radicals

- 11:40 VOLZ-THOMAS, A.; PRICE SCIENCE TEAM  
On the status of peroxy radical measurements:  
results from the peroxy radical intercomparison  
exercises I + II (Solicited Paper)

#### 12:10 Poster Summaries

**MIHELE, C.M.; HASTIE, D.R.**  
The effect of humidity on wall loss and chain  
lengths in radical amplifiers  
**EL BOUDALI, A.; MAGUIN, F.; LAVERDET, G.;  
LE BRAS, G.**  
Measurements of peroxy radical concentrations in a  
peri-urban atmosphere using the chemical amplifier  
method  
**ANDRES HERNANDEZ, M.D.; BURKERT, J.;  
GERHARD, M.; REICHERT, L.; STÖBENER, D.;  
BURROWS, J.P.**  
Role of peroxy radicals in the formation of tropo-  
spheric ozone in Bremen  
**HANKE, M.; REINER, T.; ARNOLD, F.**  
Laboratory studies on the selective measurement of  
organic peroxy radicals and HO<sub>2</sub> by chemical con-  
version/ion molecule reaction mass spectrometry  
**REINER, T.; HANKE, M.; ARNOLD, F.;  
ZIEREIS, H.; SCHLAGER, W.; JUNKERMANN,  
W.**  
Aircraft-borne measurements of peroxy radicals,  
related trace gases, and UV radiation  
**CLEMITSHAW, K.C.; SUGIER, J.; JENKIN, M.E.;  
HEARD, D.E.; PILLING, M.J.; BURROWS, J.P.;  
MIHELICIC, D.J.; LAVERDET, G.; HJORTH, J.**  
Peroxy radical initiative for measurements in the  
environment (PRIME): a new EU project

#### 13:00 LUNCH

Chairperson: Monks, P.S.

#### OH radicals

- 14:00 HOFZUMAHAUS, A.  
OH radicals in the atmosphere (Solicited Paper)

#### 14:30 Poster Summaries

**BERRESHEIM, H.; ELSTE, T.; WEINER, R.;  
PLASS-DÜLMER, C.; EISELE, F.L.; TANNER,  
D.J.**  
Tests and evaluation of an ion assisted mass spectro-  
metric technique for long-term monitoring of atmo-  
spheric OH-radicals  
**WEBER, M.; HOFZUMAHAUS, A.; HOLLAND,  
F.; SCHÄFER, J.; SEDLACEK, M.**  
The measurement of tropospheric HO<sub>2</sub> radical con-  
centrations by laser-induced fluorescence at low  
pressure  
**SEDLACEK, M.; WEBER, M.; HOFZUMAHAUS,  
A.**  
Investigation of the effective absorption  
cross-sections of water vapour and oxygen for the  
VUV emissions of low pressure mercury lamps at  
185 NM  
**CREASEY, D.J.; HALFORD-MAW, P.A.;  
HEARD, D.E.; LEE, J.D.; PILLING, M.J.;  
WHITAKER, B.J.**  
Measurement of HO<sub>x</sub> in the marine boundary layer  
**CARSLAW, N.; JACOBS, P.J.; PILLING, M.J.**  
Modelling radical chemistry in the marine boundary  
layer

**MONKS, P.S.; CARSLAW, N.; EVANS, M.; SHALLCROSS, D.; LEWIS, A.C.; LAW, K.; PENKETT, S.A.; PYLE, J.; PILLING, M.J.**

Isoprene and radicals: sstimulants for the export of continental ozone?

**FORBERICH, O.; PFEIFFER, P.; COMES, F.J.**

Tropospheric OH box-modelling and analytical studies: comparison with observations from the WAOSE'95

**HAUSMANN, M.; HOLLAND, F.; KOHLMANN, J.-P.; ROHRER, F.; EHHALT, D.H.**

On the dependence of the OH radical concentration on its precursors: results of the POPCORN field campaign

**CALANCA, P.; REIMANN, S.; HOFER, P.**

Inferring OH concentrations from diurnal variations of non-methane hydrocarbons

**KOHLMANN, J.-P.; POPPE, D.**

Influence of the uncertainty of gas phase rate constants on the modeled tropospheric OH concentrations

**COLLINS, W.J.; STEVENSON, D.S.; JOHNSON, C.E.; DERWENT, R.G.**

Chemical processes affecting the global distribution of OH in a tropospheric Lagrangian chemistry model  
**ACKERMANN, R.; GEYER, A.; STUTZ, J.; LOERZER, J.; KURTENBACH, R.; BECKER, K.-H.; PLATT, U.**

Simultaneous DOAS-measurements of HONO and its precursors in a traffic tunnel

**KOURTIDIS, K.; ZEREFOS, C.; TSIOURI, I.; SCHMITT, R.; RAPPENGLUECK, B.; SUPPAN, P.; FABIAN, P.**

Production and destruction rate of OH at an island and a suburban site in Greece during the 1996 PAUR campaign

**KRAUS, A.; HOFZUMAHAUS, A.**

Airborne measurements of the absolute solar actinic UV flux and the  $O_3 \rightarrow O(^1D)$  photolysis frequency in the troposphere between 0-12 km altitude

**HASZPRA, L.; RADICS, K.**

A quality control/quality assessment method for atmospheric non-methane hydrocarbon (NMHC) measurement

**ELANSKY, N.F.; VOLOKH, A.A.; VLASENKO, T.S.; KUZNETSOV, G.I.; TEREKHOVA, O.A.**

Volatile organic compounds and peroxy radicals concentrations for urban and rural regions of Russia

16:30 END OF SESSION

## OA19 Free-radicals in the troposphere (co-sponsored by ST) - Poster Session

Convener: Dorn, H.-P.

Co-Convener(s): Volz-Thomas, A.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: LES MUSES

Chairperson: Andrés Hernandez, M.

OA363 **DUBOIS, R.; FLENTJE, H.**

Measurements of nitrate radicals and estimation of particle surface area at Cape Arkona (Rügen Island)

OA364 **ALLAN, B.J.; COE, H.; MCFIGGANS, G.; PLANE, J.M.C.**

Studies of the nitrate radical in the troposphere

OA365 **MIHELE, C.M.; HASTIE, D.R.**

The effect of humidity on wall loss and chain lengths in radical amplifiers

OA366 **EL BOUDALI, A.; MAGUIN, F.; LAVERDET, G.; LE BRAS, G.**

Measurements of peroxy radical concentrations in a peri-urban atmosphere using the chemical amplifier method

OA367 **ANDRES HERNANDEZ, M.D.; BURKERT, J.; GERHARD, M.; REICHERT, L.; STÖBENER, D.; BURROWS, J.P.**

Role of peroxy radicals in the formation of tropospheric ozone in Bremen

OA368 **HANKE, M.; REINER, T.; ARNOLD, F.**

Laboratory studies on the selective measurement of organic peroxy radicals and  $HO_2$  by chemical conversion/ion molecule reaction mass spectrometry

OA369 **REINER, T.; HANKE, M.; ARNOLD, F.; ZIEREIS, H.; SCHLAGER, W.;**

JUNKERMANN, W.

Aircraft-borne measurements of peroxy radicals, related trace gases, and UV radiation

OA370 **CLEMITSHAW, K.C.; SUGIER, J.; JENKIN, M.E.; HEARD, D.E.; PILLING, M.J.; BURROWS, J.P.; MIHELICIC, D.J.; LAVERDET, G.; HJORTH, J.**

Peroxy radical initiative for measurements in the environment (PRIME): a new EU project

OA371 **BERRESHEIM, H.; ELSTE, T.; WEINER, R.; PLASS-DÜLMER, C.; EISELE, F.L.; TANNER, D.J.**

Tests and evaluation of an ion assisted mass spectrometric technique for long-term monitoring of atmospheric OH-radicals

OA372 **WEBER, M.; HOFZUMAHAUS, A.; HOLLAND, F.; SCHÄFER, J.; SEDLACEK, M.**

The measurement of tropospheric  $HO_2$  radical concentrations by laser-induced fluorescence at low pressure

OA373 **SEDLACEK, M.; WEBER, M.;**

HOFZUMAHAUS, A.

Investigation of the effective absorption cross-sections of water vapour and oxygen for the VUV emissions of low pressure mercury lamps at 185 NM

OA374 **CREASEY, D.J.; HALFORD-MAW, P.A.; HEARD, D.E.; LEE, J.D.; PILLING, M.J.; WHITAKER, B.J.**

Measurement of  $HO_x$  in the marine boundary layer

OA375 **CARSLAW, N.; JACOBS, P.J.; PILLING, M.J.**

Modelling radical chemistry in the marine boundary layer

OA376 **MONKS, P.S.; CARSLAW, N.; EVANS, M.; SHALLCROSS, D.; LEWIS, A.C.; LAW, K.; PENKETT, S.A.; PYLE, J.; PILLING, M.J.**

Isoprene and radicals: sstimulants for the export of continental ozone?

OA377 **FORBERICH, O.; PFEIFFER, P.; COMES, F.J.**

Tropospheric OH box-modelling and analytical studies: comparison with observations from the WAOSE'95

OA

- OA378 **HAUSMANN, M.**; HOLLAND, F.; KOHLMANN, J.-P.; ROHRER, F.; EHHALT, D.H.  
On the dependence of the OH radical concentration on its precursors: results of the POPCORN field campaign
- OA379 **CALANCA, P.**; REIMANN, S.; HOFER, P.  
Inferring OH concentrations from diurnal variations of non-methane hydrocarbons
- OA380 **KOHLMANN, J.-P.**; POPPE, D.  
Influence of the uncertainty of gas phase rate constants on the modeled tropospheric OH concentrations
- OA381 **COLLINS, W.J.**; STEVENSON, D.S.; JOHN-SON, C.E.; DERWENT, R.G.  
Chemical processes affecting the global distribution of OH in a tropospheric Lagrangian chemistry model
- OA382 **ACKERMANN, R.**; GEYER, A.; STUTZ, J.; LOERZER, J.; KURTENBACH, R.; BECKER, K.-H.; PLATT, U.  
Simultaneous DOAS-measurements of HONO and its precursors in a traffic tunnel
- OA383 **KOURTIDIS, K.**; ZEREFOS, C.; TSIOURI, I.; SCHMITT, R.; RAPPENGLUECK, B.; SUPPAN, P.; FABIAN, P.  
Production and destruction rate of OH at an island and a suburban site in Greece during the 1996 PAUR campaign
- OA384 **KRAUS, A.**; HOFZUMAHAUS, A.  
Airborne measurements of the absolute solar actinic UV flux and the  $O_3 \rightarrow O(^1D)$  photolysis frequency in the troposphere between 0-12 km altitude
- OA385 **HASZPRA, L.**; RADICS, K.  
A quality control/quality assessment method for atmospheric non-methane hydrocarbon (NMHC) measurement
- OA386 **ELANSKY, N.F.**; VOLOKH, A.A.; VLASENKO, T.S.; KUZNETSOV, G.I.; TEREKHOVA, O.A.  
Volatile organic compounds and peroxy radicals concentrations for urban and rural regions of Russia

## **OA20 Radiogenic isotopes as tracers of source-areas for aerosols, suspended matter and sediments (co-sponsored by ST)**

Convener: Grousset, F.E.  
Co-Convener(s): Sirocko, F.  
**Wednesday, 22 April 1998**  
Lecture Room: CLIO  
Chairperson: Jeandel, C.

- 08:30 **BISCAYE, P.E.**  
Tracking particles and particulate processes with radiogenic isotope tracers (Solicited Paper)
- 09:00 **JOURNEL, B.**; ALLEMAN, L.; NICOLAS, E.; VERON, A.; HAMELIN, B.  
Stable lead isotopes contribution to the chemical climatology of the western Mediterranean
- 09:15 **CARIGNAN, J.**; REISBERG, L.; SPATZ, C.  
Sm/Nd isotopes in continental aerosols: results from a study of epiphytic lichens

- 09:30 **REVEL, M.**; BISCAYE, P.; GROUSSET, F.; BASILE, J.  
Particle grain-size control on the Sr-Nd and Pb isotopic composition
- 09:45 **TACHIKAWA, K.**; JEANDEL, C.  
REE pattern and Nd isotopic ratios of seawater, filtered suspensions and trapped materials from tropical NE Atlantic
- 10:00 **HUON, S.**; MONIE, P.; JANTSCHIK, R.; KÜBLER, B.  
K-Ar and  $^{40}Ar/^{39}Ar$  isotopic signature of enhanced ice rafting supply in the NE Atlantic
- 10:15 **SIROCKO, F.**; GOLDSTEIN, S.L.  
Provenance of clastic sediments in the northern Indian Ocean: evidence from the  $^{143}Nd/^{144}Nd$ ,  $^{87}Sr/^{86}Sr$  composition
- 10:30 **GROUSSET, F.E.**; PARRA, M.; BORY, A.  
Saharan wind regimes traced by the Sr-Nd isotopic composition of the subtropical Atlantic sediments
- 10:45 **BASILE, I.**; GROUSSET, F.; REVEL, M.; PETIT, J.R.; BISCAYE, P.; ALBAREDE, F.; JAGOUTZ, E.  
Origin of continental and volcanic aerosols of the Vostok ice core (Antarctica)
- 11:00 **SVENSSON, A.**; BISCAYE, P.E.; GROUSSET, F.E.  
On the origin of continental dust in the Greenland GRIP ice core back to 44 kyr BP
- 11:15 **ANDERSEN, K.K.**; GENTHON, C.  
GCM modelling of atmospheric dust transportation with constraints on paleo sources
- 11:30 **END OF SESSION**
- 12:00 **Business Meetings**

## **OA21 Biogeochemical interactions in the coastal marine environment**

Convener: Monaco, A.  
Co-Convener(s): Price, N.B.  
**Monday, 20 April 1998**  
Lecture Room: CLIO  
Chairperson: Zavatarelli, M.

- 08:30 **HAINES, K.**; WU, P.; ROETHER, W.; STRATFORD, K.  
Simulations of CFC12 distributions with a GCM of the Mediterranean Sea
- 08:45 **ZAVATARELLI, M.**; PINARDI, N.; ALLEN, J.I.  
Simulation of the seasonal cycle of the Adriatic Sea ecosystem with a high resolution coupled ecosystem model
- 09:00 **O'RIORDAN, C.**; TUSSEAU, M.H.; MORTIER, L.  
Modelling biogeochemical cycles in a coastal zone: sensitivity to nutrient inputs from rivers and sediments
- 09:15 **SCHRUM, C.**  
Interannual variability of fluxes across the North Sea boundaries
- 09:30 **SCHMIDT, S.**; REYSS, J.-L.  
Mesoscale estimation of particle dynamics, derived from  $^{234}Th$ , in surface waters across the Iberian margin
- 09:45 **MIGON, C.**; SANDRONI, V.; COPIN-MONTEGUT, G.  
Phosphates in rainwaters: total fluxes and partitioning between labile and refractory phases

- 10:00 **VEYSSY, F.**; MANEUX, E.; ETCHEBER, H.; BUAT-MENARD, P.  
Transfers of total suspended matter (TSM) and particulate organic carbon (POC) from watersheds to estuaries by the south-western French river systems
- 10:15 **GOGOU, A.**; BOULOUBASSI, I.; STEPHANOU, E.G.  
Vertical fluxes of organic species in a coastal marine area (eastern Mediterranean): autochthonous vs. allochthonous contribution
- 10:30 BREAK
- Chairperson: Price, N.B.
- 11:00 **DANOVARO, R.**; **MARRALE, D.**; DELLA CROCE, N.; PARODI, P.; FABIANO, M.  
Characterization of sedimentary organic matter in north and south Aegean Sea (eastern Mediterranean): analysis of the bacterial contribution to the biopolymeric carbon
- 11:15 **ANSCHUTZ, P.**; SUNDBY, B.; LEFRANCOIS, L.; LUTHER III, G.W.; MUCCI, A.  
High-resolution microelectrode profiles of redox species in sediment pore waters
- 11:30 **LAPAQUELLERIE, Y.**; BLANC, G.; MAILLET, N.; **ANSCHUTZ, P.**; LATOUCHE, C.; **BUAT-MENARD, P.**  
Temporal patterns of cadmium contamination within the Lot-Garonne-Gironde (France) fluvial system
- 11:45 **GUIEU, C.**; **RDAME, C.**  
Biogeochemical processes affecting the distribution of trace metals in the Danube mixing zone
- 12:00 **GARNIER, J.-M.**; **GUIEU, C.**  
Simulation of the Cd and Mn behaviour in the Danube mixing zone using stable and radioactive trace elements as indicators
- 12:15 **ALLEMAN, L.**; FERRAND, J.; **HAMELIN, B.**; **RADAKOVITCH, O.**; ABASSI, A.; HEUSSNER, S.  
Anthropogenic lead and  $^{210}\text{Pb}$  as indicators of particles resuspension in the Gulf of Lions
- 12:30 **PATES, J.M.**; PRICE, N.B.; COOK, G.T.  
Are natural radionuclides suitable carbon cycle tracers in the Mediterranean?
- 12:45 **MARECHAL, C.N.**; NICOLAS, E.; ALBAREDE, F.  
Isotopic and elemental variability of Cu and Zn in sediment trap material from the central Atlantic Ocean
- 13:00 END OF SESSION
- 17:00 Opening
- 19:30 Reception

## **OA21 Biogeochemical interactions in the coastal marine environment - Poster Session**

Convener: Monaco, A.  
Co-Convener(s): Price, N.B.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: LES MUSES  
Chairperson: Buat-Menard, P.

- OA387 **NICOLAS, E.**; BETHOUX, J.P.; MIGON, C.  
Geochemical implications of atmospheric lead decrease on the Mediterranean sea environment

- OA388 **CERQUEIRA, M.A.**; PIO, C.A.  
The atmospheric flux of dimethyl sulphide from a southwest European estuary
- OA389 **SANDRONI, V.**; JOURNEL, B.; MIGON, C.; NICOLAS, E.  
Trace metal dissolved and particulate phases in atmospheric inputs
- OA390 **RIDAME, C.**; GUIEU, C.; LÖYE-PILOT, M.-D.  
Total atmospheric fluxes of trace metals in northwestern Mediterranean from 2 years measurement (1995 to 1997)
- OA391 **DELGADO, C.**; PERIS, G.; ROSEL, J.; ESTEVE, V.  
X-ray fluorescence elemental analysis of PM-10 airborne particulate at a Mediterranean coastal site (Castellon, Spain)
- OA392 **SANZA, G.**; PERIS, G.; CARDA, J.; ESTEVE, V.  
Chemical characterization of individual aerosol particles collected by cascade impactor sampling at Castellon (Spain)
- OA393 **SARMA, V.V.S.S.**; DILEEP KUMAR, M.  
Control of pH by rock-water interactions with implications to air-sea exchange of carbon dioxide in a tropical estuarine (Mandovi-Zuari) complex
- OA394 **DIAZ, F.**; RAIMBAULT, P.; CONAN, P.  
Variability of primary production and f ratio in a Mediterranean coastal zone during spring bloom
- OA395 **BALBONI, V.**; BOLDRIN, A.; CIVITARESE, G.; DE LAZZARI, A.; GIORDANI, P.; MALAGUTI, A.; MISEROCCHI, S.; RABITTI, S.; STRADA, L.; TURCHETTO, M.M.  
Primary production and short term carbon export in southern Adriatic and Ionian Sea
- OA396 **DE BOVEE, F.**; PICON, P.; MEDERNACH, L.; SCHMIEDL, G.; BUSCAIL, R.  
In-situ studies of biogeochemical processes occurring at the deep-sea floor: first results obtained with the Banyuls Benthic Lander
- OA397 **JAMET, D.**; GOURDEAU, J.; JAMET, J.L.; GENEYS, C.; DESPIAU, S.  
Annual cycle of plankton activity and DMS production in a coastal zone

## **OA22 Biogeochemical processes in submarine hydrothermal systems along the Hellenic Volcanic Island Arc - Poster Session**

Convener: Varnavas, S.  
Co-Convener(s): Dando, P.R.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Thursday, 17:00 - 19:00  
Poster Area: LES MUSES  
Chairpersons: Varnavas, S.; Dando, P.R.  
Editors: Varnavas, S.; Dando, P.R.

- OA398 **ETIOPE, G.**; ITALIANO, F.; FUDA, J.L.; FAVALLI, P.; FRUGONI, F.; CALCARA, M.; SMRIGLIO, G.; MARANI, M.  
Deep submarine gas vents in the Aeolian off-shore

OA399 THE AEGEAN HYDROTHERMAL FLUXES  
 OA22-007 CONSORTIUM  
 Hydrothermal fluxes and biological production in  
 the Aegean

## OA22 Biogeochemical processes in subma- rine hydrothermal systems along the Hellenic Volcanic Island Arc

Convener: Varnavas, S.  
 Co-Convener(s): Dando, P.R.  
**Friday, 24 April 1998**  
 Lecture Room: EUTERPE  
 Chairpersons: Varnavas, S.; Dando, P.R.  
 Editors: Varnavas, S.; Dando, P.R.

14:00 ZIEBIS, W.; FORSTER, S.; BOERNER, R.;  
 OA22- MENDER, S.  
 001 Geochemical gradients and biogeochemical processes  
 in sediments at hydrothermal vents off Milos,  
 Aegean Sea  
 14:15 KÖBL, R.; STÜBEN, D.; ALIANI, S.; DANADO,  
 OA22- P.  
 002 Hydrothermal plume composition and distribution  
 south of Milos, Aegean Sea, Greece  
 14:30 RAHNER, S.; HALBACH, P.; PRIEBE, M.;  
 OA22- VARNAVAS, S.P.  
 003 Hydrothermal activities in the Saronic Gulf and in  
 the Kos-Yali waters, Greece  
 14:45 VARNAVAS, S.P.; MEGALOVASILIS, P.;  
 OA22- PANAGIOTARAS, D.; DANDO, P.  
 004 Compositional and morphological characterisation of  
 particulate matter in hydrothermal fields of the  
 Hellenic Volcanic Arc \*  
 15:00 MAKROPOULOS, K.; KOUSKOUNA, A.;  
 OA22- KARNASOPOULOU, A.; DANDO, P.;  
 005 VARNAVAS, S.P.  
 Seismicity in the Aegean hydrothermal system in  
 relation to biogeochemical parameters \*  
 15:15 Discussion  
 15:30 END OF SESSION

## OA23 Operational oceanography: existing systems, developments and future potential

Convener: Flather, R.A.  
 Co-Convener(s): Bohle-Carbonell, M.  
**Wednesday, 22 April 1998**  
 Lecture Room: URANIE  
 Chairperson: N.N.

09:00 PEREZ GOMEZ, B.; RODRIGUEZ SANCHEZ-  
 AREVALO, I.; ALVAREZ FANJUL, E.  
 NIVMAR: a storm surge forecast system for the  
 Iberian Peninsula. Implementation and hindcast  
 benchmark  
 09:15 SZTOBRYN, M.; KOWALSKA, B.  
 Sea level forecast in the Gulf of Gdansk on the basis  
 of integrated system of maritime operational hydro-  
 logical forecasting  
 09:20 JANSSEN, F.  
 The quality of operational water level forecasts in  
 dependence upon the formulation of the surface drag

09:25 FLATHER, R.A.; PROCTOR, R.; JAMES, I.D.;  
 JONES, E.; SMITH, J.A.; DAVIES, A.M.;  
 KWONG, C.M.; HOLT, M.W.; DAVIES, J.  
 Status of UK operational storm surge forecasting for  
 the NW European Shelf  
 09:40 CARRETERO ALBIACH, J.C.; GOMEZ LAHOZ,  
 M.; FANJUL, E.A.; ALFONSO-MUNOYERRO,  
 M.A.; LOPEZ MALDONADO, J.D.  
 A wave forecasting system for the Spanish harbours  
 09:55 OCAMPO-TORRES, F.J.  
 Wave field evolution in coastal regions  
 10:10 HARGREAVES, J.C.  
 Wave prediction in shallow water  
 10:15 REICHERT, K.; DITTMER, J.; NIETO BORGE,  
 J.C.; HESSNER, K.  
 WaMoS II: an operational wave monitoring system  
 10:20 GURGEL, K.-W.; WYATT, L.R.  
 Applications of HF-radar in operational oceanogra-  
 phy  
 10:25 FUNKQUIST, L.  
 HIROMB - an operational 3D model for the North  
 Sea-Baltic Sea  
 10:30 EIGENHEER, A.; FUNKQUIST, L.  
 Performance of the HIROMB  
 10:45 VOS, R.J.; BOON, J.G.; TEN BRUMMELHUIS,  
 P.G.J.; GERRITSEN, H.  
 Structured data model integration to assess the state  
 of SPM on the northwest European shelf  
 11:00 BAHUREL, P.; DOMBROWSKY, E.; GIRAUD, S.;  
 AUDOUBERT, J.-M.  
 Developing operational systems for ocean monitor-  
 ing: experience and key points to the SOPRANE  
 system on the eastern North Atlantic  
 11:15 GIRAUD, S.; BAHUREL, P.; GAILLARD, F.;  
 DOMBROWSKY, E.  
 How an operational ocean forecast system helps  
 during an ocean scientific cruise. Application to  
 SOPRANE/CAMBIOS98 experiment  
 11:30 PARKER, B.B.  
 Oceanographic nowcast/forecast model systems for  
 bays and harbors  
 11:45 LUNCH  
 12:00 Business Meetings

Chairperson: N.N.

14:00 NÖHREN, I.; DUWE, K.; BAUMERT, H.;  
 MAHNKE, P.  
 An operational model system for a tidal estuary:  
 routine investigations and scientific prospects in the  
 existing river Elbe development  
 14:15 BURWELL, D.; LUTHER, M.E.; SCHMIDT, N.;  
 VINCENT, M.  
 The Tampa Bay physical oceanographic real-time  
 system (PORTS)  
 14:30 VAN DEN BOOGAARD, H.F.P.; WÜST, J.C.  
 The potential of neural networks for operational  
 oceanography  
 14:45 TIMMEN, L.; BASTOS, L.; BOEBEL, T.;  
 CUNHA, S.; FORSBERG, R.; GIDSKEHAUG, A.;  
 HEHL, K.; MEYER, U.; NESEMAN, M.;  
 OLESEN, A.V.  
 A new airborne gravimetry/altimetry system for  
 coastal oceanography - the AGMASCO project  
 14:50 VINCENT, P.; MENARD, Y.; ESCUDIER, P.;  
 PARISOT, F.; PERBOS, J.; BOAIN, R.  
 Jason-1 altimetry and operational applications

- 15:05 **LIONELLO, P.**; ELVINI, E.; MALGUZZI, P.; TOMASIN, A.; TOSI, E.  
The MAAMMed project: meteo-marine prediction in the Mediterranean Sea
- 15:20 **HARDING, J.**; PRELLER, R.; RHODES, R.  
Coastal ocean prediction at the Naval Research Laboratory
- 15:35 **COURTIER, PH.**; **ANDRE, J.-C.**  
MERCATOR, a French programme for operational oceanography
- 15:50 **CANIAUX, G.**; GIORDANI, H.; PLANTON, S.  
Determination of the best data set for the surface turbulence fluxes computing: application to the MERCATOR project
- 15:55 **BOONE, C.**; LE TRAON, P.Y.  
Operational processing of altimeter data for climate studies (DUACS project)
- 16:00 **BOBANOVIC, J.**; THOMPSON, K.R.; SHENG, J.  
Operational modelling of the eastern Canadian Shelf seas
- 16:15 **BARGAGLI, A.**; CARILLO, A.; MARIOTTI, A.; NICASTRO, S.; PISACANE, G.; RUTI, P.M.; STRUGLIA, M.V.; VALENTINOTTI, F.  
A high resolution integrated forecast system over the Mediterranean Basin
- 16:30 **BLAYO, E.**; DEBREU, L.  
Adaptive mesh refinement and zoom methods for ocean prediction
- 16:35 **END OF SESSION**

### **OA23 Operational oceanography: existing systems, developments and future potential - Poster Session**

Convener: Flather, R.A.

Co-Convener(s): Bohle-Carbonell, M.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: LES MUSES

- OA119 **SZTOBRYN, M.**; KOWALSKA, B.  
Sea level forecast in the Gulf of Gdansk on the basis of integrated system of maritime operational hydrological forecasting
- OA120 **JANSSEN, F.**  
The quality of operational water level forecasts in dependence upon the formulation of the surface drag
- OA121 **HARGREAVES, J.C.**  
Wave prediction in shallow water
- OA122 **REICHERT, K.**; DITTMER, J.; NIETO BORGE, J.C.; HESSNER, K.  
WaMoS II: an operational wave monitoring system
- OA123 **GURGEL, K.-W.**; WYATT, L.R.  
Applications of HF-radar in operational oceanography
- OA124 **FUNKQUIST, L.**  
HIROMB - an operational 3D model for the North Sea-Baltic Sea
- OA125 **TIMMEN, L.**; BASTOS, L.; BOEBEL, T.; CUNHA, S.; FORSBERG, R.; GIDSKEHAUG, A.; HEHL, K.; MEYER, U.; NESEMANN, M.; OLESEN, A.V.  
A new airborne gravimetry/altimetry system for coastal oceanography - the AGMASCO project

- OA126 **CANIAUX, G.**; GIORDANI, H.; PLANTON, S.  
Determination of the best data set for the surface turbulence fluxes computing: application to the MERCATOR project
- OA127 **BOONE, C.**; LE TRAON, P.Y.  
Operational processing of altimeter data for climate studies (DUACS project)
- OA128 **BLAYO, E.**; DEBREU, L.  
Adaptive mesh refinement and zoom methods for ocean prediction
- OA129 **NAKAMURA, S.**  
Interannual sea level variations and the Sa tide in the northwestern seismic zone
- OA130 **SZTOBRYN, M.**; KADSKA, A.; KRZYSZTOFIK, K.  
Comparison between observed, hindcast and nowcast sea level on the southern part of the Baltic Sea
- OA131 **WROBLEWSKI, A.**  
Dynamic regression and EOF forecast model applied for splitting linear and nonlinear forcing of the Baltic storm surge

### **OA24 Marine data management: assimilation, hindcasting and nowcasting**

Convener: Evensen, G.

Co-Convener(s): Gerritsen, H.

Thursday, 23 April 1998

Lecture Room: ERATO

Chairperson: N.N.

- 08:30 **EVENSEN, G.**  
An Ensemble Kalman Filter with an isopycnic coordinate ocean general circulation model
- 08:45 **MADSEN, H.**; CANIZARES, R.; VESTED, H.J.; JENSEN, H.R.  
Application of the Kalman filter for data assimilation in coastal area modelling
- 09:00 **ECHEVIN, V.**; DE MEY, P.; EVENSEN, G.  
Sensitivity to observations in a coastal model of the northwestern Mediterranean Sea
- 09:15 **VERRON, J.**; BRASSEUR, P.; PHAM-DIN-TUAN; GOURDEAU, L.  
A singular evolutive extended Kalman filter
- 09:30 **BRASSEUR, P.**; BALLABRERA, J.; VERRON, J.  
Assimilation of altimetric data in eddy-resolving primitive-equation models
- 09:45 **ANNAN, J.D.**  
Temperature assimilation in the North Sea
- 10:00 **NECHAEV, D.**; SCHRÖTER, J.; YAREMCHUK, M.  
An inverse finite element model of the large scale circulation in the South Atlantic
- 10:15 **VEERSE, F.**  
Estimation of analysis error statistics for variational data assimilation
- 10:30 **BREAK**

Chairperson: N.N.

- 11:00 **BOBANOVIC, J.**; THOMPSON, K.R.  
Hindcasting the synoptic variability in the Gulf of Saint Lawrence

OA



- 11:15 KIVMAN, G.A.; GUESSEN, A.V.; KURAPOV, A.L.  
Tuning weights and smoothing parameters of the general inversion
- 11:30 ATHIAS, V.; MAZZEGA, P.; JEANDEL, C.  
Nonlinear inversion of in situ data from oceanic dissolved-particulate exchanges
- 11:45 NATVIK, L.-J.; EKNES, M.; EVENSEN, G.  
Studying marine ecosystems in terms of data assimilation
- 12:00 WIRTH, A.; GHIL, M.  
A quasi-geostrophic data assimilation scheme for primitive-equation models
- 12:15 TEN BRUMMELHUIS, P.G.-J.; BOON, J.G.; GERRITSEN, H.; VOS, R.J.  
Sensitivity analysis of an integrated model for suspended sediment transport in the North Sea
- 12:30 BLANCHET, I.; COURTIER, R.  
An experimental system for Mercator
- 12:45 JACOB, A.; EVENSEN, G.; HAMRE, T.  
A Marine Information System (MIS) in support of a coastal zone monitoring and prediction system
- 13:00 END OF SESSION

#### **OA24 Marine data management: assimilation, hindcasting and nowcasting - Poster Session**

Convener: Evensen, G.  
Co-Convener(s): Gerritsen, H.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: LES MUSES

- OA132 XU, Z.; HENDRY, R.; LODER, J.  
Tidal data assimilation for the Newfoundland and South Labrador Shelves by a direct inverse method
- OA133 KILLWORTH, P.D.; DIETERICH, CH.; OSCHLIES, A.; WILLEBRAND, J.; MOLINES, J.-M.  
Improving the mean state of a model by assimilating mean topography together with SSH anomalies: results from the DYNAMO project
- OA134 LOUVEL, S.  
Weak-constraint variational assimilation of altimeter data in a non-linear ocean model
- OA135 BARCKICKE, J.; MENARD, Y.  
Wave models analysis improvement by using altimetric wave heights
- OA136 CARME, S.; PHAM, D.T.; BLAYO, E.; VERRON, J.  
Reduced Kalman filter applied to data assimilation with strongly non linear models
- OA137 LEREDDE, Y.; DEKEYSER, I.; DEVENON, J.L.  
T-S data assimilation in a 3D circulation model to optimize the turbulent viscosity
- OA138 VEERSE, F.  
Multiple-truncation incremental strategies for variational data assimilation
- OA139 LANGENBERG, H.  
A 40-year coupled hindcast of ocean and atmosphere in the North Sea region

- OA140 MURRAY, M.J.; ALLEN, M.R.  
Optimal interpolation and statistical analysis of SST fields from ATSR
- OA141 SMEDSTAD, O.M.; FOX, D.N.; HURLBURT, H.E.; JACOBS, G.A.; METZGER, E.J.; RHODES, R.C.; SHRIVER, J.F.  
A nowcast/forecast system based on the global NRL Layered Ocean Model (NLOM)

#### **OA25 Developments in weather forecasting I**

Convener: Gustafsson, N.  
Co-Convener(s): Benard, P.  
**Monday, 20 April 1998**  
Lecture Room: THALIE  
Chairperson: Gustafsson, N.

- 08:30 BENJAMIN, S.G.; BROWN, J.M.  
Forecasts from the 1-H assimilation cycle in the 40-km rapid update cycle
- 08:45 THERY, C.; DEFER, E.; SOLOMON, R.  
Numerical modelisation of storm dynamics, precipitation and electrification
- 09:00 BAER, F.  
Improving time integration schemes in prediction models
- 09:15 LORRIMER, S.J.; MILTON, S.F.  
Enhanced resolution in the UK Meteorological Office operational NWP system
- 09:30 FOX-RABINOVITZ, M.; STENCHIKOV, G.; SUAREZ, M.; TAKACS, L.; GOVINDARAJU, R.  
A variable resolution stretched grid dynamical core of a finite-difference GCM with a real orography: long-and-medium-term integrations
- 09:45 MAKIN, V.; PEROV, V.  
On the wind speed dependence of momentum, sensible heat and moisture exchange coefficients over sea in the 3-D HIRLAM
- 10:00 BEST, M.J.  
Representing urban areas in numerical weather prediction models
- 10:15 WEDI, N.P.  
Advances in the coupling of physical parameterizations with the "dynamics" in a global NWP model
- 10:30 END OF PART I  
17:00 Opening  
19:30 Reception

#### **OA25 Developments in weather forecasting II**

Convener: Gustafsson, N.  
Co-Convener(s): Benard, P.  
**Tuesday, 21 April 1998**  
Lecture Room: THALIE  
Chairperson: Benard, P.

- 08:30 PEROV, V.; IVARSSON, K.-I.  
Implementation of the nonlocal vertical diffusion scheme based on E -  $\epsilon$  approach in 3D HIRLAM
- 08:45 GUSTAFSSON, N.; LINDSKOG, M.; BERRE, L.; NAVASCUES, B.; HUANG, X.-Y.  
A 3-dimensional variational data assimilation for HIRLAM

- 09:00 **HUANG, X.-Y.**; GUSTAFSSON, N.; LINDSKOG, M.; BERRE, L.; NAVASCUES, B.  
A comparison between the HIRLAM OI and the HIRLAM 3DVAR systems
- 09:15 **HUANG, X.-Y.**; GUSTAFSSON, N.; KÄLLEN, E.; THORSTEINSSON, S.  
Simplified variational data assimilation techniques with a limited area model
- 09:30 **DEE, D.**; STAJNER, I.; RIISHOJGAARD, L.P.  
Estimation of anisotropic forecast error correlation parameters for the GEOS-DAS ozone assimilation system
- 09:45 **FOX-RABINOVITZ, M.**  
The impact of diabatic initialization of the stratospheric data assimilation
- 10:00 **RIISHOJGAARD, L.P.**  
An efficient method for estimating the error variance of a meteorological analysis
- 10:15 **DEE, D.**; RUKHOVETS, L.; DA SILVA, A.; LARSON, J.  
An adaptive buddy check for on-line quality control of observations
- 10:30 **BREAK**
- Chairperson: Fox-Rabinovitz, M.S.
- 11:00 **TODLING, R.**; GUO, J.; RIISHOJGAARD, L.P.; DA SILVA, A.M.  
Estimating analysis errors with the physical-space statistical analysis system
- 11:15 **NURMI, P.**  
Any improvements or trends in the quality of final weather forecasts? - Results based on verifications over the past 20 years
- 11:30 **MAISEY, P.E.**  
On developments and performance of a site specific forecast model
- 11:45 **TURRONI, E.**; CORDOLA, M.; PELOSINI, R.; BONELLI, P.  
Meteorology for the 1997 world championship of alpine ski
- 12:00 **PLAUT, G.**  
French stations temperatures empirical forecasting at several time scales using space-time principal components
- 12:15 **ADEM, J.**; MENDOZA, V.M.; RUIZ, A.; VILLANUEVA, E.E.; GARDUNO, R.  
Progress in seasonal weather prediction with a thermodynamic model
- 12:30 **BUIZZA, R.**; MILLER, M.; PALMER, T.N.; ISAKSEN, L.  
Simulating model uncertainties in ensemble prediction
- 12:45 **TOTH, Z.**; ZHU, Y.; IYENGAR, G; MARCHOK, T.; KALNAY, E.  
On the relative merits of increasing model resolution vs. running an ensemble
- 13:00 **END OF SESSION**

## OA25 Developments in weather forecasting - Poster Session

Convener: Gustafsson, N.  
Co-Convener(s): Benard, P.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: LES MUSES  
Chairperson: Benard, P.

- OA319 **ANDREJCZUK, M.**  
Modelling of mesoscale phenomena on parallel and vector computer
- OA320 **LINDSKOG, M.**; ENGARDT, M.  
the performance of the HIRLAM model in the tropics and sulphur transport studies based on its forecasts
- OA321 **MELONEK, M.**; JAKUBIAK, B.  
Implementation of the MOS technique for improved mesoscale forecasts
- OA322 **READ, P.L.**; THOMAS, N.P.J.  
Validation of numerical advection schemes via simulations of baroclinically unstable flow in the laboratory
- OA323 **KLINGSPORN, M.**; MÖLDERS, N.; RAABE, A.  
Testing of an explicit subgrid-scheme within the Deutschland-Model
- OA324 **LINDH, O.**; NILSSON, S.  
RIPP; a new forecast production system for increased efficiency and automatization in Sweden
- OA325 **BRUNET, G.**; RITCHIE, H.; WANG, R.; BOER, G.; ZWIERS, F.; SHENG, J.; PLANTE, A.; GAGNON, N.; VAUTARD, R.; PLAUT, G.; DEROME, J.  
A multi-model hybrid approach to seasonal prediction: optimising a probabilistic forecast

## OA26 Will the probabilistic approach be the future for numerical weather predictions?

Convener: Buizza, R.  
Co-Convener(s): Toth, Z.  
Thursday, 23 April 1998  
Lecture Room: M2  
Chairperson: Smith, L.

- 14:00 **REED, D.N.**  
The future of practical weather forecasting in an uncertain world (Solicited Paper)
- 14:30 **DU, J.**; TRACTON, M.S.; TOTH, Z.; JUANG, H.  
Short-Range Ensemble Forecasting (SREF) at NCEP/EMC
- 14:45 **LEGG, T.P.**  
Probability forecasting for the National Meteorological Centre in Bracknell
- 15:00 **LANGFJELL, I.**; IVERSEN, T.; BARKMEIJER, J.; PALMER, T.  
On ensemble prediction in a limited area
- 15:15 **HERSBACH, H.**; MUREAU, R.; OPSTEEGH, J.D.; BARKMEIJER, J.  
Application of regional singular vectors to the ensemble prediction system

## Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00, Lecture Room Clio

- 15:30 ZHU, Y.; TOTH, Z.; KALNAY, E.  
Probabilistic quantitative precipitation forecasts (PQPF) based on the NCEP global ensemble
- 15:45 GILMOUR, I.; SMITH, L.A.  
Towards internally consistent ensembles in NWP
- 16:00 HANSEN, J.; SMITH, L.A.; GILMOUR, I.  
Towards better initial conditions: variational assimilation, nonlinear noise reduction, and i-shadowing
- 16:15 BRINI, F.; PASQUERO, C.; TREVISAN, A.  
An economical alternative to four-dimensional variational assimilation
- 16:30 PIRES, C.; VAUTARD, R.  
Comparing long-range, statistical, dynamical and hybrid forecasts in the atmosphere
- 16:45 DOBLAS-REYES, F.J.; DEQUE, M.  
Long-range probabilistic forecasts in multimodel ensembles
- 17:00 Joint Discussion for NP2.1 and OA26  
TOTH, Z.; BUIZZA, R.; TALAGRAND, O.; MULLEN, S.; SMITH, L.  
Open discussion on ensemble forecasting: Where are we and where do we go?
- 17:30 END OF SESSION

## OA26 Will the probabilistic approach be the future for numerical weather predictions? - Poster Session

Convener: Buizza, R.  
Co-Convener(s): Toth, Z.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Thursday, 17:30 - 19:00  
Poster Area: LES MUSES

- OA326 YUSHKOV, V.P.  
Will the probabilistic approach be the future for predictions?
- OA327 SILVA, E.D.  
Using nonparametric statistics to measure centrality of rainfall distribution
- OA328 CRAIG, G.C.  
Ensemble properties of cumulus convection - some inferences from statistical mechanics

## OA27 Marine tropospheric chemistry

Convener: Brauers, T.  
Co-Convener(s): Schrems, O.  
Thursday, 23 April 1998  
Lecture Room: GALLIENI 5  
Chairperson: Hofzumahaus, A.

- 08:30 KANAKIDOU, M.  
Chemical processes and interaction with transport in the marine troposphere. An overview (Solicited Paper)
- 09:00 SCHREMS, O.  
The ALBATROSS campaign 1996: an atmospheric chemistry study over the northern and southern Atlantic (overview)

09:15 Poster Summaries of 3 min. per summary

BRAUERS, T.; DORN, H.-P.; SCHREMS, O.; WELLER, R.  
The ALBATROSS Field campaign: setup and meteorological conditions

GAUTROIS, M.; KOPPMANN, R.; LECKEBUSCH, G.; REINER, A.; SPETH, P.  
The latitudinal distribution of hydrocarbons and halocarbons during the ALBATROSS campaign

FISCHER, R.G.; BALLSCHMITER, K.  
Alkyl nitrates and multifunctional alkyl nitrates in remote Atlantic air

KASTLER, J.; BALLSCHMITER, K.  
Alkyl nitrates - trace constituents of the marine troposphere

DÖRRLER, S.; BALLSCHMITER, K.  
Levels and patterns of semivolatile organohalogenated compounds in marine air of the Atlantic Ocean

NOTHOLT, J.; SCHREMS, O.  
Total column density measurements of atmospheric trace gases by solar absorption spectroscopy

SCHÄFER, J.; BEYERLE, G.; SCHREMS, O.  
Lidar measurements of tropospheric water vapour over the Atlantic during the ALBATROSS campaign

BABOUKAS, E.; SCIARE, J.; BARDOUKI, H.; GWGOU, A.; MIHALOPOULOS, N.  
Spatio-temporal variability of ionic composition of aerosols, DMSO and Aitken nuclei during the Albatross campaign

RAIROUX, P.; NEUBER, R.; SCHREMS, O.; FREY, S.; WÖSTE, L.  
Lidar observation of aerosol in the troposphere between 20°N to 30°S above the Atlantic Ocean

09:45 Change over

GOGOU, A.; MIHALOPOULOS, N.; STEPHANOU, E.G.  
Organic composition of marine aerosols over the Atlantic Ocean: study of their origin and occurrence during the ALBATROSS campaign

KRISCHKE, U.; STAUBES, R.; JÄESCHKE, W.  
Measurements of SO<sub>2</sub> and NSS-SO<sub>4</sub><sup>2-</sup> over the Atlantic ocean during ALBATROSS: a case study on the kinetics of the SO<sub>2</sub> oxidation in the marine boundary layer

SCIARE, J.; BABOUKAS, E.; KOUVARAKIS, G.; BELVISO, S.; MIHALOPOULOS, N.  
Spatio-temporal variability of atmospheric DMS, sulfur dioxide, nitric acid, ammonia and organic acids during the Albatross campaign

BELVISO, S.; MIHALOPOULOS, N.; SCIARE, J.; CLAUSTRE, H.; MARTIN, V.; DENIS, M.  
Broad scale variability of DMS in the Atlantic. Assessment of some controlling factors

BELVISO, S.; MIHALOPOULOS, N.; SCIARE, J.  
First Atlantic meridional transect of sea surface DMS concentration along 30°W with 15 km of spatial resolution

BRAUERS, T.; KRAUS, A.; HOFZUMAHaus, A.; WELLER, R.  
Measurement of the HOx (OH+HO<sub>2</sub>) production rate in the boundary layer of the Atlantic Ocean

\* not included in the Book of Abstracts

**HAUSMANN, M.; BRAUERS, T.; BISTER, A.; DORN, H.-P.**

Measurements of the OH concentration in the boundary layer of the Atlantic Ocean by differential optical absorption spectroscopy

**HOLLAND, F.; HOFZUMAHAUS, A.; SEDLACEK, M.; WEBER, M.**

Measurements of the OH and HO<sub>2</sub> concentrations in the marine boundary layer during ALBATROSS using laser-induced fluorescence spectroscopy

OA401

**GAUTROIS, M.; KOPPMANN, R.; LECKEBUSCH, G.; REINER, A.; SPETH, P.**

The latitudinal distribution of hydrocarbons and halocarbons during the ALBATROSS campaign

OA402

**FISCHER, R.G.; BALLSCHMITER, K.**

Alkyl nitrates and multifunctional alkyl nitrates in remote Atlantic air

OA403

**KASTLER, J.; BALLSCHMITER, K.**

Alkyl nitrates - trace constituents of the marine troposphere

OA404

**DÖRRLER, S.; BALLSCHMITER, K.**

Levels and patterns of semivolatile organohalogenated compounds in marine air of the Atlantic Ocean

OA405

**NOTHOLT, J.; SCHREMS, O.**

Total column density measurements of atmospheric trace gases by solar absorption spectroscopy

OA406

**SCHÄFER, J.; BEYERLE, G.; SCHREMS, O.**

Lidar measurements of tropospheric water vapour over the Atlantic during the ALBATROSS campaign

OA407

**BABOUKAS, E.; SCIARE, J.; BARDOUKI, H.; GWGOU, A.; MIHALOPOULOS, N.**

Spatio-temporal variability of ionic composition of aerosols, DMSO and Aitken nuclei during the Albatross campaign

OA408

**RAIROUX, P.; NEUBER, R.; SCHREMS, O.; FREY, S.; WÖSTE, L.**

Lidar observation of aerosol in the troposphere between 20°N to 30°S above the Atlantic Ocean

OA409

**GOGOU, A.; MIHALOPOULOS, N.; STEPHANOU, E.G.**

Organic composition of marine aerosols over the Atlantic Ocean: study of their origin and occurrence during the ALBATROSS campaign

OA411

**KRISCHKE, U.; STAUBES, R.; JAESCHKE, W.**

Measurements of SO<sub>2</sub> and NSS-SO<sub>4</sub><sup>2-</sup> over the Atlantic ocean during ALBATROSS: a case study on the kinetics of the SO<sub>2</sub> oxidation in the marine boundary layer

OA412

**SCIARE, J.; BABOUKAS, E.; KOUVARAKIS, G.; BELVISO, S.; MIHALOPOULOS, N.**

Spatio-temporal variability of atmospheric DMS, sulfur dioxide, nitric acid, ammonia and organic acids during the Albatross campaign

OA413

**BELVISO, S.; MIHALOPOULOS, N.; SCIARE, J.; CLAUSTRE, H.; MARTIN, V.; DENIS, M.**

Broad scale variability of DMS in the Atlantic. Assessment of some controlling factors

OA414

**BELVISO, S.; MIHALOPOULOS, N.; SCIARE, J.**

First Atlantic meridional transect of sea surface DMS concentration along 30°W with 15 km of spatial resolution

OA415

**BRAUERS, T.; KRAUS, A.; HOFZUMAHAUS, A.; WELLER, R.**

Measurement of the HOx (OH+HO<sub>2</sub>) production rate in the boundary layer of the Atlantic Ocean

OA416

**HAUSMANN, M.; BRAUERS, T.; BISTER, A.; DORN, H.-P.**

Measurements of the OH concentration in the boundary layer of the Atlantic Ocean by differential optical absorption spectroscopy

10:15 Change over

**BURKERT, J.; ANDRES HERNANDEZ, M.D.; STÖBENER, D.; BURROWS, J.P.**

Peroxy radical measurements in the marine boundary layer

**DORN, H.-P.; BISTER, A.; BRAUERS, T.; HAUSMANN, M.; HOFZUMAHAUS, A.; HOLLAND, F.; SEDLAZEK, M.; WEBER, M.**

Comparison of long-path laser absorption and laser induced fluorescence measurements of OH radicals in the marine Atlantic boundary layer

**TÜG, H.; GROSS, CHR.**

UV-radiation measurements over northern and southern Atlantic

**BISTER, A.; BRAUERS, T.; DORN, H.-P.; HAUSMANN, M.; WELLER, R.; KRISCHKE, U.**

Comparison of HCHO and SO<sub>2</sub> measurements in the boundary layer of the Atlantic Ocean

**WELLER, R.; SCHREMS, O.; BODDENBERG, A.; GÄB, S.; LEIBROCK, E.; JUNKERMANN, W.**

Hydroperoxides and formaldehyde in the marine boundary layer of the Atlantic (48°N-35°S) measured during the Albatross Campaign

**WEITKAMP, C.; GLAUER, J.; KÖHLER, S.; BISLING, P.; RASCHKE, E.; KAUFELD, L.; WELLER, R.; SCHREMS, O.**

Ozone height-profile measurements over the Atlantic Ocean along the 30° W meridian within the Albatross project

**KANAKIDOU, M.; SCIARE, J.; BABOUKAS, E.; BELVISO, S.; BRAUERS, T.; DORN, H.P.; KRISCHKE, U.; MIHALOPOULOS, N.**

How well can we simulate the atmospheric chemistry of the marine boundary layer of the Atlantic Ocean?

**GROS, V.; POISSON, N.; MARTIN, D.; KANAKIDOU, M.; BONSAING, B.**

Factors controlling the observed seasonal variation of surface ozone at Amsterdam Island

10:45 END OF SESSION

## OA27 Marine tropospheric chemistry - Poster Session

Convener: Brauers, T.

Co-Convener(s): Schrems, O.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: LES MUSES

OA400 **BRAUERS, T.; DORN, H.-P.; SCHREMS, O.; WELLER, R.**

The ALBATROSS Field campaign: setup and meteorological conditions

- OA417 **HOLLAND, F.**; HOFZUMAHAUS, A.; SEDLACEK, M.; WEBER, M.  
Measurements of the OH and HO<sub>2</sub> concentrations in the marine boundary layer during ALBATROSS using laser-induced fluorescence spectroscopy
- OA418 **BURKERT, J.**; ANDRES HERNANDEZ, M.D.; STÖBENER, D.; BURROWS, J.P.  
Peroxy radical measurements in the marine boundary layer
- OA419 **DORN, H.-P.**; BISTER, A.; BRAUERS, T.; HAUSMANN, M.; HOFZUMAHAUS, A.; HOLLAND, F.; SEDLAZEK, M.; WEBER, M.  
Comparison of long-path laser absorption and laser induced fluorescence measurements of OH radicals in the marine Atlantic boundary layer
- OA420 TÜG, H.; GROSS, CHR.  
UV-radiation measurements over northern and southern Atlantic
- OA421 **BISTER, A.**; BRAUERS, T.; DORN, H.-P.; HAUSMANN, M.; WELLER, R.; KRISCHKE, U.  
Comparison fo HCHO and SO<sub>2</sub> measurements inn the boundary layer of the Atlantic Ocean
- OA422 **WELLER, R.**; SCHREMS, O.; BODDENBERG, A.; GÄB, S.; LEIBROCK, E.; JUNKERMANN, W.  
Hydroperoxides and formaldehyde in the marine boundary layer of the Atlantic (48°N-35°S) measured during the Albatross Campaign
- OA423 **WEITKAMP, C.**; GLAUER, J.; KÖHLER, S.; BISLING, P.; RASCHKE, E.; KAUFELD, L.; WELLER, R.; SCHREMS, O.  
Ozone height-profile measurements over the Atlantic Ocean along the 30° W meridian within the Albatross project
- OA424 KANAKIDOU, M.; SCIARE, J.; BABOUKAS, E.; BELVISO, S.; BRAUERS, T.; DORN, H.P.; KRISCHKE, U.; MIHALOPOULOS, N.  
How well can we simulate the atmospheric chemistry of the marine boundary layer of the Atlantic Ocean?
- OA425 **GROS, V.**; POISSON, N.; MARTIN, D.; KANAKIDOU, M.; BONSAING, B.  
Factors controlling the observed seasonal variation of surface ozone at Amsterdam Island

## European Geophysical Society

*Inviting the scientists of the world to participate in the*

### Millennium Conference on Earth, Planetary & Solar Systems Sciences

**- 25th General Assembly -**

Fortezza da Basso, Florence, Italy  
3-7 April 2000

Join this unique celebration of the past and the new millennium in the capital of Renaissance and in the beauty of Tuscany.

Suggestions regarding the scientific programme and any inquiries should be addressed to:

EGS Office  
Max-Planck-Str. 13  
37191 Katlenburg-Lindau  
Germany

Tel: +49-5556-1440  
Fax: +49-5556-4709  
EGS@COPERNICUS.ORG  
<http://www.copernicus.org/EGS/EGS.html>

# Solar-Terrestrial Sciences

## ST1 Review session on solar-terrestrial sciences

Convener: Fabian, P.  
Co-Convener(s): Hapgood, M.A.  
**Monday, 20 April 1998**  
Lecture Room: M7  
Chairperson: Hapgood, M.A.

- 11:00 HARRISON, R.A.  
Our new Sun (Solicited Paper)
- 11:25 LOCKWOOD, M.; HAPGOOD, M.A.  
The structure of the dayside magnetopause and of dayside auroral precipitations due to pulsed magnetopause reconnection (Solicited Paper)
- 11:50 SAUVAUD, J.-A.  
The nightside magnetospheric tail (Solicited Paper)
- 12:15 ALEXEEV, I.I.  
Estimation of the amount of energy transferred from solar wind to the Earth magnetosphere and ionosphere
- 12:30 ZIOMAS, I.  
Ozone layer and solar UV (Solicited Paper) \*
- 12:55 KRIVOLUTSKY, A.; PEREJASLOVA, N.; BAZILEVSKAYA, G.  
Global response of ozone to cosmic influence
- 13:10 END OF SESSION
- 17:00 Opening
- 19:30 Reception

## ST1 Review session on solar-terrestrial sciences - Poster Session

Convener: Fabian, P.  
Co-Convener(s): Hapgood, M.A.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: AGORA 3 - ST

- ST001 PEROV, S.P.; KRUCHENITSKY, G.M.; ZVIYAGINTSEV, A.M.; TIMASHEV, S.F.; KOSTYUCHENKO, I.G.  
Short- and long-term ozone layer variations and their correlations with solar activity
- ST002 SOUF ELJIL, R.; GAK, E.Z.  
The solar radiation and models of control processes on water storage dynamics in North African conditions
- ST002A AVAKYAN, S.V.  
Ionizing radiation of the Sun and solar-terrestrial connections

## Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00, Lecture Room M8

## ST2 Open session on the middle atmosphere (co-sponsored by OA) I

Convener: Dameris, M.  
Co-Convener(s): Krüger, B.C.  
**Monday, 20 April 1998**  
Lecture Room: M7  
Chairperson: Dameris, M.

- 14:00 LÜBKEN, F.-J.; JARVIS, M.J.; JONES, G.O.L.  
First in situ temperature measurements in the summer mesosphere at Antarctic latitudes (Solicited Paper)
- 14:30 SIEBERT, J.; FRICKE, K.H.; STEBEL, K.; BARABASH, V.; KIRKWOOD, S.  
Simultaneous measurements of noctilucent clouds and polar mesosphere summer echoes above northern Scandinavia in August 1997
- 14:45 HOFFMANN, P.; SINGER, W.; KEUER, D.; BREMER, J.; RÜSTER, R.  
Mean diurnal variations of PMSE and winds as measured with the ALOMAR-SOUSY radar during the summer months from 1994 to 1997
- 15:00 LANGE, M.; SCHMINDER, R.; JACOBI, CH.; BAIER, F.; GÜNTHER, G.  
Simulation of middle atmosphere winds and comparison with long-term mesopause wind measurements at Collm Observatory (52°N 15°E)
- 15:15 MITCHELL, N.J.; HOWELLS, V.ST.C.  
Variances and spectra of gravity-wave vertical velocities at mesopause heights
- 15:30 HOWELLS, V.ST.C.; MITCHELL, N.J.; MÜLLER, H.G.  
Climatology and tidal interactions of short-period gravity waves at meteor heights
- 15:45 JACOBI, CH.; SCHMINDER, R.; KÜRSCHNER, D.  
The quasi 16-day wave in the summer midlatitude mesopause region and its dependence on the equatorial quasi-biennial oscillation
- 16:00 SOUPRAYEN, C.; HAUCHECORNE, A.; GARNIER, A.; HERTZOG, A.  
Middle atmosphere winds at Observatoire de Haute-Provence (44°N) by Doppler rayleigh lidar: seasonal and planetary scale variability
- 16:15 RÜSTER, R.; NASTROM, G.D.; SCHMIDT, G.  
Radar measurements of fine structures observed in the lower atmosphere
- 16:30 END OF PART I
- 17:00 Opening
- 19:30 Reception

## ST2 Open session on the middle atmosphere (co-sponsored by OA) II

Convener: Dameris, M.  
Co-Convener(s): Krüger, B.C.  
**Tuesday, 21 April 1998**  
Lecture Room: M7  
Chairperson: Krüger, B.C.

- 08:30 PAWSON, S.; COY, L.; DOUGLASS, A.; ROOD, R.  
The southern hemisphere winter of 1997 (Solicited Paper)
- 09:00 NAUJOKAT, B.; LENSCHOW, R.; PAWSON, S.  
A meteorological review of the stratospheric winter 1997/98

ST

- 09:15 **WAUGH, D.W.; RANDEL, W.J.**  
Climatology of Arctic and Antarctic polar vortices using elliptical diagnostics
- 09:30 **WHITEWAY, J.A.; DUCK, T.J.; CARSWELL, A.I.**  
Measurements of gravity wave activity and thermal structure in the Arctic stratospheric vortex
- 09:45 **KRÜGER, K.; LANGEMATZ, U.; PAWSON, S.**  
The "16-day" eastward-travelling wavenumber 2 in the stratosphere: a comparison between the hemispheres
- 10:00 **CHOI, W.; GRANT, W.B.; LEE, H.; LEE, K.-M.; PARK, J.H.**  
Evidence of the secondary meridional circulation associated with the quasi-biennial oscillation observed in the distributions of trace species
- 10:15 **MARQUARDT, C.**  
Stratospheric low frequency variability in mid and high latitudes: "triple peak spectra" or "biennial oscillation"?
- 10:30 **BREAK**

Chairperson: N.N.

- 11:00 **ETLING, D.; GELHARDT, F.; SCHILLING, V.**  
Lee-waves in the stratosphere
- 11:15 **KRIVOLUTSKY, A.; BIRYUSHOV, B.; VYUSHKOVA, T.; VARGIN, P.; PANCHEVA, D.**  
Transient planetary waves structure in the middle atmosphere during 1991-1992: UARS data analysis and numerical model runs
- 11:30 **HALENKA, T.; MLCH, P.**  
Global stratospheric circulation analysis by means of spectral decomposition
- 11:45 **FRANZEN, A.; GROSSMANN, K.U.; KÜLL, V.; OFFERMANN, D.; PREUSSE, P.; SPANG, R.**  
Atmospheric trace gas correlations as measured by CRISTA
- 12:00 **BACMEISTER, J.T.; EIDMANN, G.; KÜLL, V.; OFFERMANN, D.; PREUSSE, P.**  
Comparison of CRISTA I data with ER-2 measurements with the help of a trajectory model
- 12:15 **PANCHEVA, D.; LASTOVICKA, J.**  
Planetary scale waves observed in the lower ionosphere during CRISTA I campaign
- 12:30 **KOUKER, W.; OFFERMANN, D.; KÜLL, V.; REDDMANN, TH.; RUHNKE, R.**  
Transport across the subtropical barrier as observed by the CRISTA experiment and the KASIMA/CTM
- 12:45 **GRIEGER, N.; SCHMITZ, G.**  
On the vertical wave-energy propagation from troposphere to stratosphere in different geographical regions
- 13:00 **PRASAD, S.S.; ZIPF, E.C.**  
Emerging new atmospheric chemistry of nitrous oxide and its implications (Poster)
- 13:05 **LUNCH**

Chairperson: Dameris, M.

- 14:00 **AUSTIN, J.; BUTCHART, M.; GALLANI, M.; SCAIFE, A.A.**  
Predicted stratospheric climate change from the UK meteorological Office's unified model
- 14:15 **LANGEMATZ, U.; ERLEBACH, P.**  
Stratospheric sudden warmings in the Berlin TSM GCM, part I: sensitivity to radiative heating rates and resolution

- 14:30 **BRAESICKE, P.; LANGEMATZ, U.**  
Stratospheric sudden warmings in the Berlin TSM GCM. Part 2: diagnosis using the TEM formulation
- 14:45 **TIMMRECK, C.; FEICHTER, J.; GRAF, H.-F.**  
GCM simulations of stratospheric background aerosol
- 15:00 **RICCIARDULLI, L.; GARCIA, R.R.**  
On the excitation of equatorial waves by deep convection in the NCAR community climate model
- 15:15 **BAIER, F.; GÜNTHER, G.**  
Sensitivity studies of the winter middle atmosphere with an adjoint mechanistic model
- 15:30 **BECK, A.; LEDER, S.**  
The evolution of the stratosphere in a 3-D global gridpoint model at the presence of steady state ENSO warm and ENSO cold forcing
- 15:45 **SCAIFE, A.A.; JAMES, I.N.; SWINBANK, R.**  
Response of the stratosphere to interannual variability in the troposphere
- 16:00 **PEUCH, V.-H.; LEFEVRE, F.; SIMON, P.**  
Initial conditions and spin-up: comparing strategies for use in CTMS
- 16:15 **RIISHOJGAARD, L.P.; STAJNER, I.**  
A comprehensive three-dimensional assimilation system for ozone and other trace constituents
- 16:30 **END OF SESSION**

## ST2 Open session on the middle atmosphere (co-sponsored by OA) - Poster Session

Convener: Dameris, M.

Co-Convener(s): Krüger, B.C.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

- ST003 **PRASAD, S.S.; ZIPF, E.C.**  
Emerging new atmospheric chemistry of nitrous oxide and its implications
- ST004 **KRÜGER, K.**  
Documentation of the eastward-travelling planetary wavenumber 2 in the northern stratosphere: 1972-1997
- ST005 **MÜLLER, K.M.; BRAESICKE, P.; LANGEMATZ, U.; PAWSON, S.; ZHONG, W.**  
Tropical waves in the Berlin TSM GCM: an intercomparison between two different vertical resolutions
- ST006 **PIEL, A.; NAUJOKAT, B.; BRAESICKE, P.**  
An examination of very cold periods in the lower and middle stratosphere of the northern hemispheric winter
- ST007 **BECK, A.**  
Mass exchange across the subtropical barrier in a 3-D global model during a simulated sudden stratospheric warming
- ST008 **RECHOU, A.; BARABASH, V.; CHILSON, P.; KIRKWOOD, S.; SAVITSKAYA, S.; STEBEL, K.**  
Analyse of the waves during fronts passages
- ST009 **BEYERLE, G.; SCHÄFER, H.-J.; LEBLANC, T.; MCDERMID, I.S.; SCHREMS, O.**  
Dual wavelength polarization lidar observations at tropical latitudes during the ALBATROSS campaign 1996

- ST010 **RICAUD, PH.**; DE LA NOE, J.; WATERS, J.W.; FROIDEVAUX, L.; CHIPPERFIELD, M.  
Temporal evolution of stratospheric chlorine monoxide over alpine stations
- ST011 **URBAN, J.**; BREMER, H.; EYRING, V.; KÜLLMANN, K.; KÜNZI, K.; WOHLGEMUTH, J.; GOEDE, A.; DE JONGE, A.; KLEIPOOL, Q.; WHYBORN, N.; HETZHEIM, H.; SCHWAAB, G.; CHIPPERFIELD, M.P.  
Trace gas measurements in the Arctic winter stratosphere with the airborne submillimeter SIS radiometer
- ST012 **JOHNSTON, J.C.**; RÖCKMANN, T.; BRENNINKMEIJER, C.A.M.  
Laboratory and modelling studies of CO<sub>2</sub> + O('D) isotopic exchange
- ST013 **HARTMANN, G.K.**; DEGENHARDT, W.; HAROGH, P.; JARCHOW, C.; RICHARDS, M.L.; LI, S.  
Water in the atmosphere and mesosphere
- ST014 **JACOBI, CH.**; SCHMINDER, R.; KÜRSCHNER, D.; KASHCHEYEV, B.L.; OLEYNIKOV, A.N.  
Measurements of summer mesopause region zonal winds over central and eastern Europe
- ST015 **BEARD, A.G.**; MITCHELL, N.J.; WILLIAMS, P.J.S.  
Bispectral analysis of non-linear tidal/planetary-wave coupling in the mesosphere and lower thermosphere
- ST016 **GOKOV, A.M.**; TYRNOV, O.F.  
Midlatitudinal lower ionosphere disturbances caused by natural sources
- ST017 **GOKOV, A.M.**; TYRNOV, O.F.  
Ionospheric parameter variations in the lower D region during magnetic storm
- ST018 **ERIKSEN, T.**; HOPPE, U.-P.; THRANE, E.V.; BLIX, T.A.  
In-situ measurements of neutral atmosphere dynamics in the polar middle atmosphere
- ST095 **DEL POZO, C.F.**; WILLIAMS, P.J.S.; NIELSEN, E.  
Simultaneous EISCAT/STARE observations of the unstable E-region
- ST096 **KIM, V.P.**; HEGAI, V.V.  
The structure of the night-time ionospheric E-region in the subauroral intense electric field strip taking into account the real tilt of geomagnetic force lines
- ST097 **KHALIPOV, V.L.**; STEPANOV, A.E.; ZIKRACH, E.K.  
The polar blobs by Yakut meridional chain ionosonde data
- ST098 **MA, S.Y.**; LIU, H.X.; SCHLEGEL, K.; XU, J.S.  
Auroral thermosphere heating and electron density depletion in the F-region at high- and mid-latitudes during two intense magnetic storms
- ST099 **SZÖCS, H.**; SZÖCS, G.M.  
Contributions to modelling of coupling between ionosphere and interplanetary magnetic field
- ST100 **PAVLOV, A.V.**; BUONSANTO, M.J.  
Anomalous electron density events in the quiet summer ionosphere at solar minimum over Millstone Hill
- ST101 **BENCZE, P.**; POOR, A.; SOL, G.; ALBERCA, L.F.  
Long-term variation of the height of the maximum electron density in the ionosphere
- ST102 **BOSKA, J.**; SAULI, P.  
Height dependence of the gravity wave activity calculated from rapid sequence ionospheric vertical sounding
- ST103 **LIU, J.Y.**; SHIAO, C.C.; TSAI, L.C.; LIU, CH.; KUO, F.S.; LUE, H.Y.; HUANG, C.M.  
Vertical phase and group velocities of ionospheric gravity waves derived from ionograms
- ST104 **MARTYNENKO, S.I.**  
Coupling between temporal and spatial scales and modelling disturbances caused by external electric field in the lower ionosphere
- ST105 **BLANC, E.**; FARGES, T.; MAMADOU, S.  
Effects of a magnetic storm on the equatorial ionosphere, observed by HF radar during the IEEY
- ST106 **FARGES, T.**  
Interpretation of equatorial ionospheric irregularities observed by HF radar in the upper E region
- ST107 **VILA, P.M.**  
Small-scale structures of quiet day F2 layer ionisation density at very low magnetic latitudes
- ST108 **SCHERLIESS, L.**; FEJER, B.G.  
Variability of equatorial F-region vertical plasma drifts
- ST109 **THIEMANN, H.**; MAYER, G.; PIEL, A.  
First results of low-latitude rocket project DEOS: Dynamics of the Equatorial ionosphere Over SHAR
- ST111 **SIZOVA, L.**  
Critical frequency foF<sub>2</sub> variations at equator
- ST112 **KUNITSYN, V.E.**; ANDREEVA, E.S.; RAZINKOV, O.G.; ZAKHAROV, V.I.  
Methods of the nearspace environment tomography
- ST113 **LILENSTEN, J.**; MOISAN, E.; LATHUILLERE, C.; PIBARET, B.; KOFMAN, W.  
Predictor scheme for the EISCAT data processing

### ST3 Open session on the ionosphere and thermosphere - Poster Session

Convener: Fontaine, D.

Co-Convener(s): Schlegel, K.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

- ST091 **BUCHERT, S.C.**; ENDO, M.; OGAWA, Y.; FUJII, R.; NOZAWA, S.; WATANABE, S.; YOSHIDA, N.  
Field-aligned ion flow events observed by the EISCAT ESR radar
- ST092 **TRISKOVA, L.**; TRUHLIK, V.; SMILAUER, J.  
Distribution of major ions in the outer ionosphere for the maximum of the 22nd solar cycle (low and middle latitudes)
- ST093 **GUIO, P.**  
A simple model for the velocity distribution of particles in a plasma with temperature gradient
- ST094 **DAVIES, J.A.**; LESTER, M.; MILAN, S.E.; ROBINSON, T.R.; YEOMAN, T.K.  
A statistical comparison of measured velocities from the CUTLASS system and the EISCAT UHF radar

ST



- ST114 CHERNYAKOV, S.M.; EVSTAFJEV, O.V.  
A digital ionospheric station in the observatory Loparskaya
- ST115 KOSCH, M.J.; HAGFORS, T.; KOHSIEK, A.; REES, D.  
The MPAE Fabry-Perot interferometer for neutral atmosphere and ionosphere interaction studies with EISCAT
- ST116 SCHLEGEL, K.; KOHSIEK, A.; KOSCH, M.  
A new method for advanced Fabry-Perot data processing
- ST117 SCHNELLER, W.J.; KERR, R.B.; NOTO, J.  
New near-IR experimental techniques to determine thermospheric composition and dynamics
- ST118 NOTO, J.; KERR, R.B.; SCHNELLER, W.J.; RUDY, R.J.; HECHT, J.H.  
Production of metastable helium in the thermosphere by He<sup>+</sup> recombination
- ST119 WITASSE, O.; LILENSTEIN, J.; LATHUILLERE, C.; BLELLY, P.L.  
Atomic oxygen forbidden lines modeled during a WINDII-EISCAT coordinated measurements
- ST120 KRASNOPOLSKY, V.A.  
HST detection of terrestrial deuterium
- ST121 PAVLOV, A.V.  
New electron energy transfer and cooling rates by excitation of N<sub>2</sub> and O<sub>2</sub>
- ST122 LIU, J.Y.; ROTTGER, J.; PAN, C.J.; LIU, C.H.; RIETVELD, M.T.; LEE, C.C.  
VHF radar and MF/HF dynasonde observations during polar mesosphere summer echo conditions at EISCAT
- ST123 ASTIN, I.  
Descent rates in PMSE type layers observed by the UK MST radar at Aberystwyth
- ST124 JACOBI, CH.  
Nonlinear interaction of planetary waves and tides as seen from midlatitude upper mesosphere/lower thermosphere wind measurements at Collm, Germany (52°N, 15°E)
- ST125 JACOBI, CH.; SCHMINDER, R.; KÜRSCHNER, D.; HOFFMANN, P.; SINGER, W.; KASHCHEYEV, B.L.; OLEYNIKOV, A.N.; FAHRUTDINOVA, A.N.; SOLNTSEV, R.N.; SOLOVJEVA, T.V.; PORTNYAGIN, YU.I.  
Climatology of the mesopause region semidiurnal tide over central and eastern Europe
- ST126 BELYAEV, P.P.; LISOV, A.A.; BELOVA, N.I.; YAKUNIN, M.N.  
Observations of wave motions in the mesopause of Earth's atmosphere with using of very low frequency signals
- ST127 MIRKOTAN, S.F.; PANCHELUGA, V.A.  
Percolation model of F2 layer critical frequency
- ST128 GOKOV, A.M.; MARTYNNENKO, S.I.; ROZUMENKO, V.T.; TSYMBAL, A.M.; TYRNOV, O.F.  
Variations in the electron collision frequency and electric fields in the lower ionosphere at middle latitudes
- ST129 CHERNOGOR, L.F.; GARMASH, K.P.; ROZUMENKO, V.T.; TYRNOV, O.F.  
On the possibility of energetic particle precipitation from the magnetosphere into the middle latitude ionosphere
- ST130 CHERNOGOR, L.F.; GARMASH, K.P.; KOSTROV, L.S.; LEUS, S.G.; POKHIL'KO, S.N.; ROZUMENKO, V.T.; TSYMBAL, A.M.; TYRNOV, O.F.  
HF Doppler probing of ionospheric perturbations which accompanied the space shuttle Atlantis launch with a geomagnetic storm as a background
- ST131 CHERNOGOR, L.F.; GARMASH, K.P.; GRITCHIN, A.I.; KOSTROV, L.S.; ROZUMENKO, V.T.; TSYMBAL, A.M.; TYRNOV, O.F.  
Observations of ionospheric D region perturbations which accompanied the space shuttle orbiter Atlantis launch with a geomagnetic storm as a background by partial reflection technique
- ST132 KIM, V.P.; HEGAI, V.V.  
Night-time F2-region electron density changes due to acoustic gravity waves excited before strong earthquakes
- ST133 CHERNOGOR  
Infrasound effects of earthquakes and their precursors on parameters of the ionosphere and magnetosphere
- ST134 ALIMOV, O.A.; NEGMATULLAEV, S.H.  
Usage of meteorologic and ionospheric data for the purposes of earthquake predictions
- ST135 KUZNETSOV, V.V.; KHOMUTOV, S.Y.; PLOTKIN, V.V.; GREKHOV, O.E.; PAVLOV, A.F.; FEDOROV, A.N.  
Seismo-ionospheric effects under the influence of the power seismovibrator to the lithosphere
- ST136 MITCHELL, C.N.; PRYSE, S.E.; KERSLEY, L.; WILLSON, C.A.; CANNON, P.  
Routine tomographic imaging of the ionosphere over UK \*

### ST3 Open session on the ionosphere and thermosphere

Convener: Fontaine, D.  
Co-Convener(s): Schlegel, K.  
**Friday, 24 April 1998**  
Lecture Room: M6  
Chairperson: Fontaine, D.

- 10:45 FEJER, B.G.; SCHERLISS, L.  
Magnetospheric and ionospheric disturbance dynamo effects in the low- and mid-latitude ionosphere (Solicited Paper)

#### Ionospheric effects

- 11:15 LILENSTEIN, J.; WITASSE, O.  
Electron and ion temperature dependence of the electric field above EISCAT over a full solar cycle
- 11:30 PRYSE, S.E.; KERSLEY, L.; SMITH, A.M.; MITCHELL, C.N.; BERRY, S.T.  
Electron density signatures of high-latitude plasma processes
- 11:45 THOROLFSSON, A.; CERISIER, J.C.  
Flux transfer events in the ionosphere: model and data
- 12:00 FUJII, R.; ENDO, M.; OGAWA, Y.; BUCHERT, S.C.; NOZAWA, S.; WATANABE, S.; YOSHIDA, N.  
Field-aligned ion flow events from the ionosphere observed by the EISCAT VHF radar

\* not included in the Book of Abstracts

- 12:15 **FORME, F.; FONTAINE, D.**  
Enhanced ion acoustic fluctuations and ion outflows in the upper ionosphere
- 12:30 **STROMME, A.; BJORNA, N.; LOVHAUG, U.P.; VAN EYKEN, A.P.**  
An attempt to interpret non-Maxwellian spectra from the EISCAT Svalbard Radar (ESR)
- 12:45 **GONZALEZ, S.A.; SULZER, M.P.**  
Recent advances in incoherent scatter radar measurement capabilities of the topside ionosphere and plasmasphere at Arecibo Observatory
- 13:00 LUNCH

Chairperson: Fontaine, D.

- 14:00 **KOSCH, M.J.; HONARY, F.; STAMATIOU, N.; HAGFORS, T.**  
A comparison of auroral optical images, riometer absorption patterns and EISCAT radar data (Solicited Paper)
- 14:30 **GRYDELAND, T.; MJOLHUS, E.; BJORNA, N.**  
Simultaneous observations of enhanced ion spectra and strong plasma lines with the EISCAT UHF radar system
- 14:45 **GUIO, P.**  
Doppler frequency interpretation of incoherent scatter plasma lines
- 15:00 **MASSON, A.; LEFEUVRE, F.; LAGOUTTE, D.; RAUCH, J.L.; ZHAO, Z.YU.**  
On the involvement of Schumann resonances in high latitudes plasma structuring
- 15:15 **LOBZIN, V.V.; PAVLOV, A.V.**  
Correlations between SAR-arc intensity and solar and geomagnetic activity
- 15:30 BREAK

Chairperson: Schlegel, K.

#### Ionosphere-thermosphere coupling

- 16:00 **KOHSIEK, A.; KOSCH, M.J.; SCHLEGEL, K.**  
Comparison of neutral and ion parameters in the high latitude E- and F-region observed by the MPAE-FPI and EISCAT
- 16:15 **FORBES, J.M.; PALO, S.; PORTNYAGIN, YU.I.; MAKAROV, N.A.; MERZLYAKOV, E.G.**  
Intradiurnal oscillations in Antarctic lower thermosphere winds: south pole observations and global implications
- 16:30 **COX, R.M.; ROLLASON, R.M.; PLANE, J.M.C.**  
An ion-molecule mechanism for the formation of neutral sporadic layers of sodium and iron
- 16:45 **PALO, S.E.; ROBLE, R.G.**  
The quasi-two-day wave in the thermosphere: a study using the time-GCM
- 17:00 **PEYMERAT, C.; RICHMOND, A.D.; EMERY, B.A.; ROBLE, R.G.**  
Evaluation of the effect of the neutral winds on the inner magnetospheric convection with a magnetosphere-thermosphere-ionosphere electrodynamic general-circulation model
- 17:15 **MÜLLER-WODARG, I.C.F.**  
Propagation of planetary waves into the thermosphere and ionosphere - a modelling study
- 17:30 END OF SESSION

#### **ST4 Open session on the magnetosphere I**

Convener: Rycroft, M.J.  
Co-Convener(s): Sandahl, I.  
**Thursday, 23 April 1998**  
Lecture Room: M5  
Chairperson: Rycroft, M.J.

- 14:00 **GRAFE, A.**  
Are our ideas about Dst correct?
- 14:15 **BOURDARIE, S.A.; BOSCHER, D.; VACARESSE, A.**  
A radiation belt model based on convection-diffusion theory including a time dependent magnetic field
- 14:30 **VACARESSE, A.; BOSCHER, D.; BOURDARIE, S.**  
A long term physical model for high energy low altitude protons
- 14:45 **LEMAIRE, J.F.; DACHEV, T.S.P.; TOMOV, B.T.; MATVIICHUK, YU.N.; KOLEVA, R.T.; SEMKOVA, J.V.; PETROV, V.M.; SHURSHAKOV, V.A.**  
Overview on the inner magnetosphere variations observed by Liliulin instrument on MIR space station
- 15:00 **PETRUKOVICH, A.A.; ZELENYI, L.M.; MUKAI, T.**  
Multi-spacecraft studies or substorms (Solicited Paper)
- 15:30 **PEDERSEN, A.; MOZER, F.S.; RUSSELL, C.T.**  
Quasistatic electric fields in and near the Northern Cusp
- 15:45 **ZAKHAROV, V.E.; MEISTER, C.-V.**  
Large-scale anomalous resistivity caused by electrostatic ion-cyclotron turbulence in the plasma of the auroral ionosphere
- 16:00 **HAPGOOD, M.; LOCKWOOD, M.**  
Ordering of electron anisotropy in the low-latitude boundary layer
- 16:15 **DEZEEUW, D.L.; GOMBOSI, T.I.; GROTH, C.P.T.; MARSHALL, H.G.; SONG, P.; POWELL, K.G.; STOUT, Q.F.**  
The response of the global magnetosphere-ionosphere system to changing IMF conditions: results from a 3D multiscale simulation
- 16:30 **HERRERO, F.A.; CHORNAY, D.J.**  
Grazing incidence neutral atom (GINA) surface conversion for the new generation of energetic neutral atom imagers in remote sensing of the magnetosphere
- 16:45 END OF PART I

#### **ST4 Open session on the magnetosphere - Poster Session**

Convener: Rycroft, M.J.  
Co-Convener(s): Sandahl, I.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:30 - 19:00**  
Poster Area: AGORA 3 - ST  
Chairperson: Rycroft, M.J.

- ST169 **BLAGOVESCHENSKY, D.V.; CHERNYAKOV, S.M.**  
A ground facility for high-latitude magnetospheric sounding
- ST170 **HAPGOOD, M.; LOCKWOOD, M.**  
The magnetopause transition parameter and the Whalen test

ST

- ST171 KOZELOVA, T.V.; KOZELOV, B.V.; LAZUTIN, L.L.; SINGER, H.; RASINKANGAS, R.; KORTH, A.  
Substorm differential magnetospheric currents estimated by CRRES data
- ST172 KUNITSYN, V.E.; SILIN, I.V.  
Possibility of tomographic investigation of magnetic reconnection in Earth's magnetosphere
- ST173 LEVITIN, A.E.  
Magnetic effects of field-aligned currents
- ST174 MARTJANOV, S.A.  
Penetration of the solar wind plasma into magnetosphere
- ST175 MARTJANOV, S.A.  
On the selfconsistent profiles in collisionless plasma with adiabatic particle motion
- ST177 RAKHMATULIN, R.A.; TABANAKOV, I.V.  
On a possible source of global Pi2 pulsations on midlatitudes
- ST178 VACARESSE, A.; BOSCHER, D.; BOURDARIE, S.; KORTH, A.; FRIEDEL, R.  
Linear correlations between the global geomagnetic index Kp, CRRES in flight measurements, and SALAMMBO 2D proton code results
- ST179 YUKHIMUK, A.K.; YUKHIMUK, V.A.; FEDUN, V.N.; FALKO, O.G.  
Nonlinear mechanism of electromagnetic radiation in the magnetized plasma

#### ST4 Open session on the magnetosphere II

Convener: Rycroft, M.J.  
Co-Convener(s): Sandahl, I.  
Friday, 24 April 1998  
Lecture Room: M5  
Chairperson: Rycroft, M.J.

- 09:00 MEZIANE, K.; WILBER, M.; PARKS, G.K.; LIN, R.P.; LARSON, D.E.; MAZELLE, C.; LEQUEAU, D.  
Dependence of upstream ion beam densities upon distance from the Earth's bow shock
- 09:15 DE KEYSER, J.; ROTH, M.  
AMPTE/IRM observations of magnetic field rotation at the dayside magnetopause
- 09:30 IVCHENKO, N.V.; SIBECK, D.G.; TAKAHASHI, K.  
Magnetopause motions as observed by Geotail satellite
- 09:45 WILKEN, B.; ZONG, Q.-G.; DOKE, T.; KOKUBUN, S.; MUKAI, T.; YAMAMOTO, T.; REEVES, G.D.; ULLALAND, S.  
CIR related substorm activity observed in the distant tail
- 10:00 KAYMAZ, Z.  
IMP 8 observations of magnetically open magnetotail during equatorial IMFs: implications for reconnection
- 10:15 SAMSONOV, A.A.; PUDOVKIN, M.I.; MEISTER, C.V.  
The solar wind flow around the Earth in dependence on the magnetopause boundary conditions
- 10:30 BREAK

Chairperson: Rycroft, M.J.

- 11:00 MAZELLE, C.; MEZIANE, K.; LE QUEAU, D.; LIN, R.P.; LARSON, D.; PARKS, G.; LEPPING, R.P.  
Nongyrotropic gyrating ion distributions and low frequency waves in the Earth's foreshock: a detailed case study
- 11:15 RUNOV, A.V.; PUDOVKIN, M.I.; MEISTER, C.V.  
Dynamics of tail-like current layer caused by anomalous resistivity
- 11:30 ALEXEEV, I.I.  
A model of disturbed magnetosphere
- 11:45 ARYKOV, A.A.; MALTSEV, YU.P.; OSTAPENKO, A.A.  
Geomagnetic and solar wind control of magnetospheric mapping
- 12:00 ALEXEEV, I.I.; BOBROVNIKOV, S.YU.  
Equilibrium of the magnetosphere and tail current dynamics
- 12:15 ALEXEEV, I.; KALEGAEV, V.  
Magnetosheath's magnetic field and magnetopause structure for high magnetic shear
- 12:30 FESHCHENKO, E.YU.; MALTSEV, YU.P.  
Magnetospheric plasma pressure restored from the magnetic data
- 12:45 MALTSEV, YU.P.; OSTAPENKO, A.A.  
Storm effect on the bulk magnetic field in the magnetosphere
- 13:00 LUNCH

Chairperson: Rycroft, M.J.

- 14:00 MALTSEV, YU.P.; REZHENOV, B.V.  
Effects of  $B_z$  and  $B_y$  IMF components on the Dst variation
- 14:15 SANTOLIK, O.; PARROT, M.  
On the wave propagation and polarization of ELF emissions observed by Freja around local proton gyro-frequency
- 14:30 VAGINA, L.I.; SERGEEV, B.A.  
Viewing the dipolarization region during substorm onset
- 14:45 PUDOVKIN, M.I.; SAMSONOV, A.A.; MEISTER, C.V.  
The solar wind flow around the Earth in the CGL approximation
- 15:00 EROKHIN, N.S.; RYCROFT, M.J.; NUNN, D.; ZOLNIKOVA, N.  
About phase space occupied by synchronous electrons under the extended second-order gyroresonance interaction with whistler
- 15:15 DOUDKIN, F.; KOREPANOV, V.; GOUGH, M.P.  
Imaging of boundaries in magnetosphere
- 15:30 END OF SESSION

---

#### Annales Geophysicae

the EGS journal for the publication of your contribution to the 23rd General Assembly

---

## ST5 Open session on solar and heliospheric physics I

Convener: Marsden, R.G.  
Co-Convener(s): Marsch, E.  
**Monday, 20 April 1998**  
Lecture Room: M5  
Chairperson: Marsden, R.G.

- 09:00 OLIVER, R.  
Nonlinear fast magnetohydrodynamic waves in solar coronal holes
- 09:15 ORLANDO, S.; PERES, G.; CIARAVELLA, A.; BETTA, R.; REALE, F.; KOHL, J.; NOCI, G.; FINESCHI, S.; ROMOLI, M.; BREKKE, P.; FLUDRA, A.; GURMAN, J.B.; LEMAIRE, P.; SCHUHLE, U.  
UVCS/SOHO observations of the polar high speed solar wind
- 09:30 FREDVIK, T.; MALTBY, P.  
Temporal variation and redshift of He I 584 Å in solar active regions
- 09:45 VAN DER LINDEN, R.A.M.; HOOD, A.W.  
Methods for a complete ideal MHD stability study of 1D line-tied coronal loops
- 10:00 LEBLANC, F.; HUBERT, D.  
A multispecies multimoment model for the expansion of the solar wind
- 10:15 BRANDT, J.; PETERSEN, C.C.; SNOW, M.; YI, Y.; ULYSSES COMET WATCH  
Cometary plasma tails as probes of latitudinal structure in the solar wind
- 10:30 BREAK

Chairperson: Marsden, R.G.

- 11:00 BREEN, A.R.; VARLEY, C.A.; WILLIAMS, P.J.S.; LECINSKI, A.; THOMPSON, B.; COLES, W.A.  
Interplanetary scintillation measurements of the solar wind during whole Sun month
- 11:15 ISSAUTIER, K.; MEYER-VERNET, N.; MONCUQUET, M.; HOANG, S.  
High-speed solar wind structure from Ulysses radio measurements
- 11:30 BREEN, A.R.; MCKENZIE, J.F.; MORAN, P.J.; VARLEY, C.A.; WILLIAMS, P.J.S.; DEFOREST, C.  
Acceleration of the solar wind: measurements of irregularity velocities and model results
- 11:45 FAHR, H.-J.; LAY, G.; NASS, H.U.  
Observations of solar and geocoronal LY- $\alpha$
- 12:00 KYRÖLÄ, E.; SUMMANEN, T.; SCHMIDT, W.; MÄKINEN, T.; BERTAUX, J.L.; LALLEMENT, R.; QUEMERAIS, E.; COSTA, J.  
Remote sensing of the solar wind by SWAN/SOHO Lyman  $\alpha$  measurements
- 12:15 SCHERER, K.; WOCH, J.; FAHR, H.-J.  
Short variability of the solar wind parameter
- 12:30 SCHERER, K.; MARSCH, E.; FAHR, H.-J.  
Longterm variability of the solar wind parameters
- 12:45 VARLEY, C.; WILLIAMS, P.J.S.; MORAN, P.J.; WILKINSON, W.; FALLOWS, R.; BREEN, A.R.; COLES, W.A.  
Estimates of scale size of irregularities in the fast and slow solar wind using EISCAT observations of interplanetary scintillation
- 13:00 LUNCH

Chairperson: Marsch, E.

- 14:00 MEYER-VERNET, N.; ISSAUTIER, K.  
Electron temperature in the solar wind from kinetic models
- 14:15 BAUMGÄRTEL, K.; SAUER, K.; DUBININ, E.; TARRASOV, V.; DOUGHERTY, M.  
Solar wind interaction with the Phobos gas torus: Phobos events
- 14:30 DE KEYSER, J.; ROTH, M.; SÖDING, A.  
Flow shear and magnetic field orientation at solar wind directional discontinuities: WIND observations
- 14:45 IVANOV, K.G.; ROMASHETS, E.P.  
Interplanetary disturbances with forward rotational discontinuities
- 15:00 SMITH, E.J.; BURTON, M.E.; MCCOMAS, D.J.; ANDERSON, K.A.  
Ulysses observations of a pair of slow mode shocks inside a coronal mass ejection
- 15:15 REINER, M.J.; KAISER, M.L.; FAINBERG, J.; STONE, R.G.  
Remote radio tracking of CMEs
- 15:30 GROTH, C.P.T.; GOMBOSI, T.I.; DEZEEUW, D.L.; MARSHALL, H.G.; POWELL, K.G.; STOUT, Q.F.  
3D MHD simulation of coronal mass ejections
- 15:45 FORSYTH, R.J.; BALOGH, A.; SMITH, E.J.; TSURUTANI, B.T.  
Recent heliospheric magnetic field observations as Ulysses approaches Aphelion
- 16:00 MORAN, P.J.; BREEN, A.R.; COLES, W.A.; VARLEY, C.A.; WILKINSON, W.P.; WILLIAMS, P.J.S.  
Interplanetary scintillation measurements of the large scale structure of the heliospheric magnetic fields using EISCAT
- 16:15 KIRSCH, E.; MALL, U.; WILKEN, B.; CIERPKA, K.; GALVIN, A.B.; GLOECKLER, G.; CHOTO, K.  
Suprathermal solar wind and pickup ions measured by the WIND/SMS-experiment near the libration point L1
- 16:30 END OF PART I
- 17:00 Opening
- 19:30 Reception

## ST5 Open session on solar and heliospheric physics II

Convener: Marsden, R.G.  
Co-Convener(s): Marsch, E.  
**Tuesday, 21 April 1998**  
Lecture Room: M5  
Chairperson: Mall, U.

- 09:00 FAHR, H.-J.; FICHTNER, H.; SCHERER, H.  
Extreme-ultraviolet diagnostics of pick-up ions in regions close to the solar corona
- 09:15 GRÜNWALDT, H.; MANN, I.; HILCHENBACH, M.; BOCHSLER, P.  
Correlated C<sup>+</sup> and O<sup>+</sup> source near 0.2 AU
- 09:30 FAHR, H.-J.; CHALOV, S.V.  
Phase space diffusion and anisotropic pick-up ion distributions in the solar wind
- 09:45 RUCINSKI, D.; BZOWSKI, M.  
Solar cycle-induced modulations of the inter-planetary pickup ion fluxes

ST

- 10:00 FORSYTH, R.J.; WIMMER-SCHWEINGRUBER, R.F.  
Corotating interaction regions: magnetic field behaviour in the vicinity of stream interfaces and heliospheric current sheet crossings
- 10:15 WIMMER-SCHWEINGRUBER, R.F.; VON STEIGER, R.; PAERLI, R.  
Solar wind stream interfaces in corotating interaction regions: SWICS/Ulysses results II
- 10:30 BREAK
- Chairperson: Mall, U.
- 11:00 KEPPLER, E.  
Is CIR acceleration dependent on heliographic latitude in the light of Ulysses data?
- 11:15 BOGDANOV, A.T.; MÖBIUS, E.; HILCHENBACH, M.; KLECKER, B.; HOVESTADT, D.; KISTLER, L.M.; POPECKI, M.A.; LUND, E.J.; HEIRTZLER, D.; GALVIN, A.B.; BOCHSLER, P.; GRUENWALDT, H.; IPAVICH, F.M.; GLIEM, F.  
Analysis of a  $^3\text{He}$  rich solar energetic particle event observed with ACE/SEPICA and SOHO/HSTOF
- 11:30 LARIO, D.; SANDERSON, T.R.; MARSDEN, R.G.; MAKSIMOVIC, M.; FORSYTH, R.J.; BALOGH, A.  
Ulysses and WIND observations of the transient particle events in November 1997
- 11:45 CHAIZY, P.A.; LANZEROTTI, L.J.; LEPPING, R.P.; KOKUBUN, S.K.; LIN, R.P.; BOSQUED, J.M.; SANDERSON, T.R.; YAMAMOTO, T.  
Analysis of transport conditions of energetic heliospheric electrons (WIND and GEOTAIL data)
- 12:00 BZOWSKI, M.; RUCINSKI, D.; IZMODENOV, V.  
Physical phenomena determining interstellar hydrogen distribution in the inner heliosphere
- 12:15 BZOWSKI, M.; FAHR, J.H.; RUCINSKI, D.  
On the applicability of fluid-mechanics approach in the modelling of interstellar hydrogen gas within the heliosphere
- 12:30 QUEMAERIS, E.; COSTA, J.; LALLEMENT, R.; BERTAUX, J.L.; KYRÖLÄ, E.; SCHMIDT, W.  
Interstellar neutral hydrogen velocity and temperature from SWAN/SOHO hydrogen cell measurements
- 12:45 SCHERER, K.  
The influence of the neutral gas drag in the outer heliosphere
- 13:00 IZMODENOV, V.V.; GEISS, J.; GLOECKLER, G.; BARANOV, V.B.; LALLEMENT, R.; MALAMA, YU.G.  
Interstellar atom filtration in the heliospheric interface: inferences on the LIC electron density
- 13:15 END OF SESSION

---

### Attend the Poster Session

and the

### Exhibition

---

### ST5 Open session on solar and heliospheric physics - Poster Session

Convener: Marsden, R.G.

Co-Convener(s): Marsch, E.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

Chairperson: Marsden, R.G.

- ST193 JENSEN, J.M.; JACOBSEN, B.H.; CHRISTENSEN-DALSGAARD, J.  
Rapid inversion of helioseismic time-distance data
- ST194 MEISTER, C.-V.; RUNOV, A.V.; PUDOVKIN, M.I.; ZAITSEVA, S.A.; ZAKHAROV, V.E.  
Modelling of sunspot equilibria for finite flux tube diameters
- ST195 SUKHORUKOVA, G.V.; AXFORD, W.I.; MCKENZIE, J.F.  
The connection of the fast solar wind to the chromospheric network pattern
- ST196 ORLANDO, S.; VENTURA, R.; PERES, G.; SPADARO, D.  
Propagation of three-dimensional Alfvén waves in the high speed solar wind: effects on the LYalpha and LY beta and O VI lines observed by UVCS/SOHO
- ST197 KERN, O.; WIMMER-SCHWEINGRUBER, R.F.; BOCHSLER, P.; ZURBUCHEN, T.H.; HAMILTON, D.C.  
Ca, Si, and Fe elemental abundances in the slow and cold solar wind determined from the mass instrument on WIND
- ST198 MALL, U.; KIRSCH, E.; CIERPKA, K.; WILKEN, B.; SOEDING, A.; NEUBAUER, F.; GLOECKLER, G.; GALVIN, A.; CHOTOO, S.  
Direct observation of lunar pick-up ions with WIND-STICKS
- ST199 SUMMANEN, T.; KYRÖLÄ, E.; SCHMIDT, W.; MÄKINEN, T.; BERTAUX, J.L.; LALLEMENT, R.; QUEMAERIS, E.; COSTA, J.  
Temporal variations of interplanetary lyman  $\alpha$  radiation measured by SWAN
- ST200 SCHERER, K.; FAHR, H.-J.; BANASZKIEWICZ, M.  
The dynamics of interplanetary dust particles close to the Sun: the plasma-Poynting-Robertson effects of the solar wind near the corona
- ST201 WIMMER-SCHWEINGRUBER, R.F.; BOCHSLER, P.; WIELER, R.; BAMERT, K.  
Suprathermal solar particles in lunar soils - a comparison with long-time flux averages inferred from spacecraft measurements
- ST202 LAUTH, U.; KEPPLER, E.  
Intersection of heliospheric current sheet with forward shock of corotating interaction region
- ST203 CLASSEN, H.-T.; MANN, G.; KEPPLER, E.  
Particle acceleration efficiency and MHD characteristics of CIR related-shocks
- ST204 SCHERER, K.; FICHTNER, H.  
Comparison of the cosmic ray fluxes measured onboard of Pioneer 10 and Pioneer 11
- ST205 IZMODENOV, V.V.; KALININ, A.P.; MALAMA, YU.G.  
Estimation of elastic H-H, H-H $^+$  collision influence on the interstellar atom distribution in the heliospheric interface

- ST206 BADALYAN, O.G.; VALCHUK, T.E.; YERMOLAEV, YU.I.; LIVSHITS, M.A.  
Study of helium abundance in low-speed solar wind streams on the basis of Prognoz 7 and 8 data
- ST206A YERMOLAEV, YU.I.  
Do all solar atmosphere areas provide equal solar wind kinetic energy flux?

## ST6 Nonlinear dynamics in the heliosphere (co-sponsored by NP)

Convener: Macek, W.M.  
Co-Convener(s): Carbone, V.; Grappin, R.  
**Tuesday, 21 April 1998**  
Lecture Room: GALLIENI 5  
Chairperson: Marsch, E.

### Shocks

- 08:45 GEDALIN, M.  
Fine structure of collisionless shocks: theory and observations (Solicited Paper)
- 09:15 SCHOLER, M.; KUCHARÉK, H.; TRATTNER, K.J.  
Ion injection, acceleration, and wave generation at the quasi-parallel bow shock (Solicited Paper)
- 09:45 LOUARN, P.; MANGENEY, A.  
On the universal importance of small scale electrostatic structures in acceleration/heating processes
- 10:00 RATKIEWICZ, R.; BARNES, A.; SPREITER, J.R.; STAHARA, S.S.  
Termination shock excursions: possibilities for Voyager encounter
- 10:15 ERDÖS, G.; BALOGH, A.; KOTA, J.  
Mixing of the heliospheric magnetic field lines
- 10:30 BREAK

Chairperson: Macek, W.M.

- 11:00 GALTIER, S.; FOURNIER, J.-D.  
Shocks and antishocks in the MHD-Thomas model

### Solitons and nonlinear waves

- 11:15 BAUMGÄRTEL, K.; HACKENBERG, P.; MANN, G.  
Magnetohydrodynamic solitary waves: relevance to solar wind observations
- 11:30 HACKENBERG, P.; MANN, G.; MARSCH, E.  
Solitary waves in multi-ion plasmas
- 11:45 CHAMPEAUX, S.; PASSOT, T.; SULEM, P.L.  
Alfvén wave collapse in the small-dispersion limit

### Fractals and turbulence

- 12:00 GRAPPIN, R.; LEORAT, J.  
Role of coronal conditions in the development of streams, instabilities and turbulence in the solar wind
- 12:15 SORRISO-VALVO, L.; BRUNO, R.; CARBONE, V.; VELTRI, P.  
Probability distribution functions of turbulent fluctuations in the solar wind
- 12:30 MILOVANOV, A.V.; ZELENYI, L.M.  
Multiscale structure of the interplanetary magnetic field: fracton excitations and the power-law spectra

- 12:45 PRIMAVERA, L.; MALARA, F.; VELTRI, P.  
A numerical study of the correlation between density and temperature fluctuations observed in solar wind
- 13:00 LUNCH

Chairperson: Scholer, M.

- 14:00 MARSCH, E.  
Structure functions and scalings analysis of solar wind fluctuations (Solicited Paper)
- 14:30 POLITANO, H.; POUQUET, A.  
Exact scaling laws for turbulent MHD flows
- 14:45 VELTRI, P.; MANGENEY, A.  
On the nature of intermittency in the solar wind MHD turbulence
- 15:00 VÖRÖS, Z.; KOVACS, P.; KÖRMENDI, A.; GREEN, A.W.; PLYASOVA BAKOUNINA, T.A.; JUHASZ, A.  
Self-similarity concepts for geomagnetic pulsations (Solicited Paper)
- 15:30 WERNIK, A.W.  
Properties of the solar wind turbulence as revealed by the wavelet transform
- 15:45 MACEK, W.M.  
Testing for fractal structure in the low-speed solar wind in the inner heliosphere
- 16:00 REDAELLI, S.; MACEK, W.M.  
Entropy of the solar wind flow in the inner heliosphere
- 16:15 CHIGIRINSKAYA, Y.; SCHERTZER, D.; LOVEJOY, S.  
Scaling gyroscope cascade models and the multifractal MHD intermittency
- 16:30 END OF SESSION

## ST6 Nonlinear dynamics in the heliosphere (co-sponsored by NP) - Poster Session

Convener: Macek, W.M.  
Co-Convener(s): Carbone, V.; Grappin, R.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 3 - ST

- ST207 OBOJSKA, L.; MACEK, W.M.  
Singular system analysis of the solar wind
- ST208 SALEM, C.; MANGENEY, A.; LACOMBE, C.; KELLOGG, P.J.  
Small electrostatic potential drops in the solar wind
- ST209 KOVACS, P.; VÖRÖS, Z.; KÖRMENDI, A.; GREEN, A.W.; HEGYMEGI, L.  
Wavelet analysis of geomagnetic time series

## ST7 Nonlinear processes in the ionosphere and magnetosphere (co-sponsored by NP)

Convener: Rycroft, M.J.  
Co-Convener(s): Fontaine, D.  
**Wednesday, 22 April 1998**  
Lecture Room: M8  
Chairperson: Rycroft, M.J.

- 09:00 SUKHORUKOV, A.I.; STUBBE, P.  
Sprite effects on the ionosphere
- 09:15 BUCHERT, S.C.; SAITO, S.  
On the Pedersen current carried by electrons

ST

09:30 **RYCROFT, M.J.**; DEMEKHOV, A.G.;  
TRAKHTENGERTS, V.Y.; MANNINEN, J.;  
TURUNEN, T.

Demodulation of HF radio transmitter signals by the polar electrojet

09:45 **BELIAEV, P.P.**; KANGAS, J.; BOSINGER, T.;  
TRAKHTENGERTS, V.YU.; ISAEV, S.V.;  
RIETVELD, M.

Electromagnetic remote sounding of resonance properties of polar ionosphere in the ULF frequency range 0.1 - 5 Hz with using of HF powerful heating facility

10:00 **BELIAEV, P.P.**; TRAKHTENGERTS, V.YU.;  
ISAEV, S.V.; KANGAS, J.; BOSINGER, T.

First evidence of spectral resonance structure (SRS) of ULF background electromagnetic noises at the polar region

10:15 **DUODK DE WIT, T.**

Recent developments in the characterization of nonlinear wave phenomena in space plasmas (Solicited Paper)

10:45 **BORISOV, N.**; STUBBE, P.; GORBUNOV, L.  
Parametric decay of electromagnetic pump wave in two-dimensional inhomogeneous plasma

11:00 LUNCH

12:00 Business Meetings

Chairperson: Rycroft, M.J.

14:00 **MISHIN, E.**; HAGFORS, T.

On particle acceleration by lower hybrid turbulence during ionospheric modification experiments

14:15 **POPEL, S.I.**

Modulational interaction of lower-hybrid waves and formation of coherent structures in the magnetosphere

14:30 **LEFEBVRE, B.**; KRASNOSEL'SKIKH, V.

A dynamical study of induced scattering

14:45 **MANNINEN, R.**; KAILA, K.; OIKARINEN, A.;  
MANNINEN, J.

Pulsating auroras and their connection with VLF emissions observed in northern Finland

15:00 **NUNN, D.**; MANNINEN, J.; TURUNEN, T.;  
TRAKHTENGERTS, V.; EROKHIN, E.

On the nonlinear triggering of VLF emissions by power line harmonic radiation

15:15 **PUDOVKIN, M.I.**; **BESSER, B.P.**; LEBEDEVA,  
V.V.; ZAITSEVA, S.A.

Magnetosheath's model in the CGL approximation

15:30 **VLADIMIROV, S.V.**

Collective charging processes in dusty plasmas

15:45 **VLADIMIROV, S.V.**; CRAMER, N.F.

Linear and nonlinear properties of Alfvén waves in plasmas containing highly charged impurities or dust

16:00 Concluding Remarks

16:15 END OF SESSION

## ST7 Nonlinear processes in the ionosphere and magnetosphere (co-sponsored by NP) - Poster Session

Convener: Rycroft, M.J.

Co-Convener(s): Fontaine, D.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

Chairperson: Rycroft, M.J.

ST137 **BUTS, A.V.**; **CHATSKAYA, V.A.**; **TYRNOV, O.F.**

Influence of plasma density fluctuations on plasma-beam interaction

ST138 **BUTS, V.A.**; **CHATSKAYA, V.A.**; **TYRNOV, O.F.**

Dynamical ray focusing in inhomogeneous plasma

ST139 **BELIAEV, P.P.**; **POLYAKOV, S.V.**; **ERMAKOVA, E.N.**; ISAEV, S.V.

Experimental investigations of the ionospheric Alfvén resonator from electromagnetic noise background over the solar cycle 1985-1995

ST140 **BELIAEV, P.P.**; **SOBCHAKOV, L.A.**; **VASILYEV, A.V.**; **ASTAKHOVA, N.L.**; **POLYAKOV, S.V.**; ISAEV, S.V.

First test measurements of artificial ULF signals at the long distance 1500 km

ST141 **SITNOV, M.I.**; **MALOVA, H.V.**

The role of the electron-to-ion temperature ratio and transient electrons in the linear stability of the quasi-neutral sheet tearing mode

ST142 **ZOTOV, O.D.**

Self-affine fractal dynamics of the activities of the Sun and magnetosphere of the Earth

ST142A **VOLOKITIN, A.S.**; **KRAFFT, C.**

Nonlinear interaction of whistler waves with a modulated thin electron beam

## ST8 The high-latitude ionosphere and magnetosphere: coupling and solar wind forcing

Convener: Woch, J.

Co-Convener(s): Villain, J.-P.

Tuesday, 21 April 1998

Lecture Room: M6

Chairperson: Cowley, S.W.

08:45 **POPIELAWSKA, B.**; **GUSTAFSSON, G.**; **STASIEWICZ, K.**; **MOZER, F.Z.**; **RUSSELL, C.T.**  
Electric field characteristics of the high latitude magnetopause

09:00 **STASIEWICZ, K.**; **GUSTAFSSON, G.**; **POPIELAWSKA, B.**

Alfvénic structures in the outer cusp

09:15 **PERRY, C.H.**; **GRANDE, M.**; **KELLET, B.J.**; **REES, A.**; **FENNELL, J.F.**; **LIVI, S.**; **FRITZ, T.**

Statistics of cusp and magnetosheath ion populations observed with Polar

09:30 **VENNERSTROEM, S.**

Dayside high-altitude irregular magnetic pulsations of 2-10 minutes period, and their relationship to the solar wind

## Annales Geophysicae

The leading interdisciplinary, boundary-layer journal covering the physics and chemistry of the oceans, of the lower, middle and upper atmosphere of the Earth, of the Sun and of the interplanetary medium.

- 09:45 **NEUDEGG, D.A.**; FRASER, B.J.; MENK, F.W.; BURNS, G.B.; MORRIS, R.J.; UNDERWOOD, M.J. Local polar magnetosphere-ionosphere topology determined by ULF wave signatures using an Antarctic magnetometer array
- 10:00 **PROVAN, G.**; YEOMAN, T.K.; MILAN, S.E. CUTLASS Finland radar observations of the ionospheric signatures of flux transfer events and the resulting plasma flows
- 10:15 **JACOBSEN, B.**; LYATSKY, W. Optical signatures of travelling convection vortex events
- 10:30 **MÄLKKI, A.M.**; KOSKINEN, H.E.J.; PULKKINEN, T.I.; SANDAHL, I.; PETERSON, W.K.; BUDNICK, E.YU.; FEDEROV, A. Dispersive proton injections at high latitude, observed by INTERBALL auroral probe on January 11, 1997
- 10:45 **BREAK**

Chairperson: Villain, J.-P.

- 11:00 **SANDHOLT, P.E.**; FARRUGIA, C.J.; COWLEY, S.W.H. Pulsating cusp aurora for northward IMF
- 11:15 **TAYLOR, J.R.**; COWLEY, S.W.H.; YEOMAN, T.K.; LESTER, M.; JONES, T.B.; GREENWALD, R.A.; SOFKO, G.; VILLAIN, J.-P.; LEPPING, R.P.; HAIRSTON, M.R. Superdarn studies of the ionospheric convection response to a northward turning of the interplanetary magnetic field (Solicited Paper)
- 11:45 **GREBOWSKY, J.M.**; ERLANDSON, R.E. Observed polar cap ionosphere dependence on IMF
- 12:00 **MAKELA, J.S.**; MALKKI, A.; KOSKINEN, H.E.J.; BOEHM, M.H.; ELIASSON, L.; HOLBACK, B. Particle signatures within mesoscale auroral cavities
- 12:15 **KHAN, H.**; COWLEY, S.W.H. Investigation of dayside and nightside ionospheric response delays to changes in the IMF conditions using simultaneous satellite and EISCAT data
- 12:30 **LUNCH**

Chairperson: Woch, J.

- 14:00 **ISRAELEVICH, P.L.**; ERSHKOVICH, A.I. New method for reconstruction of the polar convection pattern
- 14:15 **ANDRE, R.**; VILLAIN, J.P.; KRASNOSEL'SKIKH, V.; HANUISE, C. Superdarn observations of small-scale expanding structures
- 14:30 **VILLAIN, J.P.**; ANDRE, R.; HANUISE, C.; GRESILLON, D. Application of collective wave scattering to superdarn radars: spatio-temporal evolution of turbulence parameters for specific geophysical events
- 14:45 **WALKER, A.D.M.**; PINNOCK, M.; BAKER, K.B.; DUDENEY, J.R.; RASH, J.P.S. Strong flow bursts in the nightside ionosphere during extremely quiet conditions
- 15:00 **KETTMANN, G.**; WOCH, J.; MALL, U.; LIVI, S.; WILKEN, B.; FRITZ, T.A.; FENNELL, J.F.; GRANDE, M. Ion composition in the high-latitude nightside magnetosphere: a statistical study

- 15:15 **SCHLEGEL, K.**; SCHWENN, R.; WOCH, J. The January 1997 CME and its terrestrial impact - an example of multi-instrument studies (Solicited Paper)
- 15:45 **OPGENOORTH, H.J.** Solar wind influence on plasma sheet processes: substorm onset and cessation (Solicited Paper) \*
- 16:15 **SAVIN, S.**; ZELENYI, L.; BUDNIK, L.; BORODKOVA, N.; FEDOROV, A.; NIKOLAEVA, N.; NOZDRACHEV, M.; ROMANOV, S.; PETRUKOVICH, A.; YERMOLAEV, YU.; MUKAI, T.; KAWANO, H.; KOKUBUN, S.; LUNDIN, R.; SANDAHL, I.; RUSSELL, C.T.; MAYNARD, N.; PARKS, G.; AMATA, E.; SAFRANKOVA, J.; NEMECEK, Z.; BLECKI, J. Boundary layer dynamics and substorms view from ISTP spacecraft
- 16:30 **LEWIS, R.V.**; FREEMAN, M.P.; REEVES, G.D. The relationship of HF radar backscatter to the accumulation of open magnetic flux prior to substorm onset
- 16:45 **STOREY, J.**; LESTER, M.; COWLEY, S.W.H.; GRANDE, M.; FRITZ, T.A. Investigation of substorm-associated features in the plasma sheet observed by the Polar satellite
- 17:00 **ZONG, Q.-G.**; WILKEN, B.; WOCH, J.; REEVES, G.D.; DOKE, T.; YAMAMOTO, T.; KOKUBUN, S.; ULLALAND, S. Energetic oxygen beams in the plasmoids with both By and Bz bipolar magnetic field signatures
- 17:15 **DE KEYSER, J.**; ROTH, M.; LEMAIRE, J. Formation and evolution of SAID in the course of a substorm
- 17:30 **END OF SESSION**

## ST8 The high-latitude ionosphere and magnetosphere: coupling and solar wind forcing - Poster Session

Convener: Woch, J.

Co-Convener(s): Villain, J.-P.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:30 - 19:00

Poster Area: AGORA 3 - ST

- ST143 **LILENSTEN, J.**; GALAND, M.; KOFMAN, W.; CATTELL, C.; SIGSBEE, K.; CARLSON, C.; MCFADDEN, J.; ERGUN, R.; STRANGWAY, R.; PFAFF, R.; BLELLY, P.L. Electron-proton precipitation effects on the ionosphere during FAST/EISCAT/ESR coordinated experiments
- ST144 **BELENKAYA, E.S.** High-latitude ionosphere and magnetosphere dependent on the solar wind magnetic field
- ST145 **FU, S.Y.**; WILKEN, B.; ZONG, Q.-G. Inner magnetosphere response to the passage of heliosphere current sheet

---

**Attend the Poster Session**

---

ST



## ST9 Effects of geomagnetic storms and high-energy particle events on the ionosphere, thermosphere, and middle atmosphere

Convener: Lastovicka, J.  
Co-Convener(s): Förster, M.  
**Monday, 20 April 1998**  
Lecture Room: M6  
Chairperson: Lastovicka, J.

- 09:00 LASTOVICKA, J.  
Introduction
- 09:15 FÖRSTER, M.; JAKOWSKI, N.  
Geomagnetic storm effects on the topside ionosphere and plasmasphere (Solicited Paper)
- 09:45 MARTINEZ-GARCIA, M.; HERNANDEZ-PAJARES, M.; JUAN, J.M.; SANZ, J.  
Obtaining the ionospheric total electron content at real-time under high geomagnetic activity conditions
- 10:00 HERNANDEZ-PAJARES, M.; JUAN, J.M.; SANZ, J.  
Global tomography during ionospheric storms using GPS data
- 10:15 TRAKHTENGERTS, V.Y.  
Contribution of energetic particle precipitation to the subauroral 3D current system and polarisation jet
- 10:30 BREAK

Chairperson: Lastovicka, J.

- 11:00 JIRICEK, F.; KUDELA, K.; SMILAUER, J.; STETIAROVA, J.; TITOVA, E.  
Energetic electron precipitation as a signature of cold plasma structure near plasmapause
- 11:15 DACHEV, T.S.P.; TOMOV, B.T.; MATVIICHUK, YU.N.; KOLEVA, R.T.; SEMKOVA, J.V.; PETROV, V.M.; SHURSHAKOV, V.A.; LEMAIRE, J.F.  
Study of the trapped radiation dependence by the neutral atmosphere variations at the altitude of the MIR space station
- 11:30 KERR, R.B.; NOTO, J.; SCHNELLER, W.J.  
Low latitude enhancements of exospheric atomic hydrogen column abundances following geomagnetic storm onset
- 11:45 PRÖLSS, G.W.  
Ionospheric storms: outstanding problems (Solicited Paper)
- 12:15 PAVLOV, A.V.  
The role of vibrationally excited oxygen and nitrogen on the ionosphere during the undisturbed and geomagnetic storm period of 6-12 April 1990
- 12:30 MIKHAILOV, A.; SCHLEGEL, K.  
Different physical mechanisms of strong negative F2-layer storm effects observed with EISCAT
- 12:45 DEL POZO, C.F.; WILLIAMS, P.J.S.; FREEMAN, K.S.; SMITH, P.N.; KOSCH, M.; HONARY, F.  
Electrodynamics of auroral arcs during various phases of a substorm
- 13:00 LUNCH

Chairperson: Förster, M.

- 14:00 CODRESCU, M.; FULLER-ROWELL, T.J.  
Modelling the effects of geomagnetic storms on the ionosphere/thermosphere system (Solicited Paper)

- 14:30 ALPEROVICH, L.  
On the sensitivity of the global current systems to the high latitude perturbations
- 14:45 MIKHAILOV, A.V.; FÖRSTER, M.; FOSTER, J.C.  
Some F2-layer effects during Jan 06-11, 1997 cedar storm period as observed with the Millstone Hill incoherent scatter facility
- 15:00 PAVLOV, A.V.; BUONSANTO, M.J.; SCHLESIER, A.C.; RICHARDS, P.G.  
Comparison of models and data at Millstone Hill during the June 5-11, 1991, storm
- 15:15 MLCH, P.; LASTOVICKA, J.  
Geomagnetic storms and total ozone (Solicited Paper)
- 15:45 SCHLEGEL, K.; FÜLLEKRUG, M.  
Changes of Schumann-resonance parameters during high energy solar particle events
- 16:00 END OF SESSION
- 17:00 Opening
- 19:30 Reception

## ST9 Effects of geomagnetic storms and high-energy particle events on the ionosphere, thermosphere, and middle atmosphere - Poster Session

Convener: Lastovicka, J.  
Co-Convener(s): Förster, M.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 3 - ST  
Chairperson: Förster, M.

- ST147 NAMGALADZE, A.A.; YURIK, R.YU.; FÖRSTER, M.  
Numerical modelling of the Earth's upper atmosphere during a geomagnetic storm
- ST148 ALMAR, I.; ILLES-ALMAR, E.; BENCZE, P.  
Effect of geomagnetic storms on thermospheric neutral density and wave activity
- ST149 BURESOVA, D.; SAULI, P.; MOSERT DE GONZALEZ, M.  
F1 region electron density profiles during geomagnetic storms as measured at Pruhonice
- ST150 FEDULINA, I.; KOZIN, I.; SMUSHLYAEV, S.  
Modelling the effects of Forbush decrease in galactic cosmic rays on ozone content
- ST151 BOCHNICEK, J.; HEJDA, P.; BUCHA, V.; PYCHA, J.  
Temperature-pressure deviations and prevailing winds in the N.H. winter troposphere in years of high and low geomagnetic activity
- ST152 LIBIN, I.YA.; PEREZ-PERAZA, J.; JAANI, A.  
Effects of geomagnetic storms and atmospheric processes
- ST153 SILBERGLEIT, V.M.  
The most geomagnetic disturbed 24-hours
- ST154 MIHAJLOVIC, S.J.; OBRADOVIC, M.  
Structure spectrum variations registered in intensive magnetic storm

\* not included in the Book of Abstracts

## ST10 Ionospheric modelling and predictions I

Convener: Hanbaba, R.  
Co-Convener(s): Zolesi, B.

**Thursday, 23 April 1998**

Lecture Room: M6

Co-sponsored by: FRANCE TELECOM-CNET, Istituto Nazionale di Geofisica

Chairperson: Bourdillon, A.

Editors: Hanbaba, R.; Zolesi, B.

14:00 LEITINGER, R.

ST10-001 Magnetic field aligned modelling for the upper F region and for the plasmasphere

14:15 LEITINGER, R.; COST 251 TROUGH TASK

ST10-002 FORCE

Modelling of the main trough of the F region for COST 251

14:30 PICOT, N.

ST10-003 Doris based ionospheric correction

14:45 BOURBILLON, A.; DE FRANCESCHI, G.; LE

ST10-004 ROUX, Y.

Improvements in target ranging by HF radar using the European ionospheric model prime

15:00 REINISCH, B.W.; HUANG, X.

ST10-005 Improving the IRI profile definition

15:15 HANBABA, R.

ST10-006 A regional model of the F-region day-to-day variability

15:30 BILITZA, D.; HERNANDEZ-PAJARES, M.;

ST10-007 JUAN, J.M.; SANZ, J.

Comparison between IRI and GPS-IGS derived electron content during 1991-97: first results

15:45 ZOLESI, B.; CANDER, L.J.R.; DE FRANCESCHI, G.

ST10-008 A regional ionospheric model for the extended European area

16:00 KOURIS, S.S.; FOTIADIS, D.N.; ZOLESI, B.

ST10-009 Specifications of the F-region variations for quiet and disturbed conditions

16:15 KUTIEV, I.; MUHTAROV, P.; CANDER, L.R.;

ST10-010 LEVY, M.F.

Short-term prediction of ionospheric parameters based on the autocorrelation analysis

16:30 PULINETS, S.A.; RADICELLA, S.M.; DEPUVE,

ST10-011 V.KH.; ZHANG, M.-L.

Topside electron density profiles modelling on the basis of vertical topside sounding data

16:45 MIKHAILOV, A.

ST10-012 Ionospheric index MF2 for monthly median foF<sub>2</sub> and M(3000)F2 modelling and long-term prediction over European area

17:00 END OF PART I

## ST10 Ionospheric modelling and predictions - Poster Session

Convener: Hanbaba, R.

Co-Convener(s): Zolesi, B.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: AGORA 3 - ST

Co-sponsored by: FRANCE TELECOM-CNET, Istituto Nazionale di Geofisica

Chairperson: Mikhailov, A.V.

Editors: Hanbaba, R.; Zolesi, B.

ST155 TRUHLIK, V.; TRISKOVA, L.; SMILAUER, J.

ST10-021 Empirical models of electron temperature and density in the outer ionosphere for period of solar maxima

ST156 LEITINGER, R.; HOCHEGGER, G.

ST10-022 Mapping monthly quartiles of ionospheric electron content and of foF<sub>2</sub>

ST157 RUFFINI, G.; CUCURULL, L.; FLORES, A.;

ST10-023 RIUS, A.; SEDO, M.J.

A PIM-aided Kalman filter for GPS tomography of the ionospheric electron content

ST158 FLECHTNER, F.; BEDRICH, S.; TEUBEL, A.

ST10-024 Comparisons of PRARE TEC with TOPEX measurements and with ionospheric models

ST159 SHAGIMURATOV, I.I.; YAKIMOVA, G.A.;

ST10-025 BARAN, L.W.

Regional model of TEC from GPS observations

ST160 ZAKHAROV, I.G.; TYRNOV, O.F.

ST10-026 Short-term critical frequency variations and their predictions in the midlatitude ionospheric F2 region

ST161 PUSHKIN, V.F.; FEDORENKO, V.N.;

ST10-027 FEDORENKO, YU.P.; TYRNOV, P.F.;

SHAGIMURATOV, I.I.

Space correction of global models of electron number density in the ionosphere by receiving at one site signals from low-orbit satellites

ST162 SCOTTO, C.

ST10-028 Recent results about the occurrence of F1 layer

ST163 DRAGO, A.; SCOTTO, C.; ZOLESI, B.;

ST10-029 ZUCCHERETTI, E.

A test of electron density profiles models based on data of the digisonde DPS-4

ST164 VILA, P.; FLEURY, R.

ST10-030 Mesoscale structures at equatorial F2 latitudes and new oblique HF telecommunications in the subsahelain bush areas

ST165 LITVINE, A.; KOFMAN, W.; CABRIT, B.

ST10-031 The ion composition measurements and modelling at altitudes from 140 to 350 km using EISCAT measurements

ST166 CIRAULO, L.; SPALLA, P.

ST10-032 Latitudinal dependence of total electron content evaluated by GPS and NNSS observations at middle latitudes

ST167 GASSE, V.; LEMUR, D.; BERTEL, L.

ST10-033 A 3D ray tracing procedure to study ionospheric tilts

ST168 STANISAWSKA, I.

ST10-034 Comparison of different instantaneous models of N(h) profiles at single location

ST168A BILGE, A.H.; TULUNAY, Y.

ST10-035 Semi empirical single station modelling of foF<sub>2</sub> variations: spectral analysis \*

## Attend the Business Meeting of your Section

Wednesday, 22 April, 12.00-14.00, Lecture Room M8

## ST10 Ionospheric modelling and predictions II

Convener: Hanbaba, R.

Co-Convener(s): Zolesi, B.

Friday, 24 April 1998

Lecture Room: M6

Co-sponsored by: FRANCE TELECOM-CNET, Istituto Nazionale di Geofisica

Chairperson: Leitinger, R.

Editors: Hanbaba, R.; Zolesi, B.

08:30 BENIGUEL, Y.

ST10-013 Characterization of ionospheric inhomogeneities a comparison between different models

08:45 BROUSSEAU, C.; PARION, P.; BERTEL, L.

ST10-014 Possible use of the LOCAP ionospheric prediction software to digital communications

09:00 BRUN, E.; SAILLANT, S.

ST10-015 NOSTRADAMUS skywave radar: a 360 ionospheric sounder

09:15 WU, J.; LI, K.; WANG, X.; SUO, Y.

ST10-016 Effects of magnetic activity on the ionospheric monthly median value f<sub>o</sub>F<sub>2</sub>

09:30 LAMMING, X.; CANDER, L.J.R.

ST10-017 Monthly median ionospheric frequencies prediction with neural networks

09:45 STANISAWSKA, I.; GULYAEVA, T.L.;

ST10-018 HANBABA, R.

Ionospheric despatch centre in Europe

10:00 ZERNOV, N.N.; GHEM, V.E.; RADICELLA, S.M.

ST10-019 The effect of the electron density profile variability with time on the HF channel scattering function

10:15 HUAR, A.; SAILLANT, S.

ST10-020 Viewing ionospheric irregularities with 360 degrees azimuthal scanning using OTH radar NOSTRADAMUS

10:30 END OF SESSION

14:45 BUDNICK, E.; SHEVELEVA, E.; FEDOROV, A.; BORODKOVA, N.; SCALSKY, A.

Structure and properties of entry layer under different orientation of interplanetary magnetic field

15:00 FEDOROV, A.; DUBININ, E.; SONG, P.; BUDNICK, E.; SCALSKY, A.

Structure of the flank magnetopause for horizontal IMF: INTERBALL observations

15:15 SKALSKY, A.; FEDOROV, A.; NOZDRACHEV, M.; ZELENYI, L.; NEMECEK, Z.; SAFRANKOVA, J.

Rotational waves at the flank magnetopause

15:30 SAVIN, S.; ZELENYI, L.; BUDNIK, E.; BORODKOVA, N.; FEDOROV, A.; KLIMOV, S.; NIKOLAEVA, N.; ROMANOV, S.; SKALSKY, A.; YERMOLAEV, Y.; ROMANOV, V.; SANDAHL, I.; SAUVAUD, J.A.; SAFRANKOVA, J.; NEMECEK, Z.; TRISKA, P.; RUSSELL, C.T.; ZHOU, X.; AMATA, E.; FEDDER, A.; URQUHART, A.; FUSELIER, S.; RAUCH, J.L.; BLECKI, J.; JOCHNIEWICZ, J.

The cusp/magnetosheath connection: magnetopause identification and turbulent boundary effects

15:45 DUBOULOZ, N.; MALINGRE, M.; BERTHELIER, J.-J.; DELCOURT, D.; GALPERIN, Y.; CHUGUNIN, D.; MULARCHIK, T.; ZININ, L.

Analysis of 3D ion distributions observed by Interball AP in the cleft ion fountain

16:00 SAUVAUD, J.A.; POPESCU, D.; PARKS, G.K.; BRITTNACHER, M.; DELCOURT, D.; PERRAUT, S.; KOVRAZHNIKIN, R.A.

INTERBALL and POLAR correlated measurements of velocity dispersed ions inside auroral surges

16:15 YAHNIN, A.G.

Substorms and pseudo-breakups as seen from coordinated Interball, Geotail, LANL, and ground-based observations

16:30 END OF PART I

## ST11 New results on the dynamics of the Earth's magnetosphere from the Interball multi-spacecraft missions I

Convener: Sauvaud, J.-A.

Co-Convener(s): Zelenyi, L.M.

Tuesday, 21 April 1998

Lecture Room: M2

Chairperson: N.N.

14:00 SANDAHL, I.; EKLUND, U.; KOSKINEN, H.; MLKKI, A.; BUDNICK, E.YU.

PROMICS-3 investigations of plasma entry into the magnetosphere

14:15 EIGES, P.; ZASTENKER, G.; NOZDRACHEV, M.; YERMOLAEV, YU.; SAFRANKOVA, J.; NEMECEK, Z.

Fast variations of ion flux and IMF in the Earth's foreshock region: INTERBALL-1 and MAGION-4 measurements

14:30 BORODKOVA, N.; KOKUBUN, S.; LEPPING, R.P.; LIN, R.; MUKAI, T.; NEMECEK, Z.; OWEN, C.; PARKS, G.; PHAN, T.; ROMANOV, S.; SAFRANKOVA, J.; SAUVAUD, J.-A.; SIBECK, D.G.; SCHWARTZ, S.; SINGER, H.; SZABO, A.; TAKAHASHI, K.; ZASTENKER, G.

The large amplitude wave on the dayside MP

## ST11 New results on the dynamics of the Earth's magnetosphere from the Interball multi-spacecraft missions II

Convener: Sauvaud, J.-A.

Co-Convener(s): Zelenyi, L.M.

Wednesday, 22 April 1998

Lecture Room: M7

Chairperson: N.N.

09:00 BÖSINGER, T.; SERGEEV, V.A.; YAHNIN, A.G.; KORNILOV, I.A.; PELLINEN, R.J.; PULKINEN, T.I.; BORODKOVA, N.L.; IUTSENKO, V.N.; NOZDRACHEV, M.M.; PROKHORENKO, V.I.; SKALSKY, A.A.; SAUVAUD, J.-A.; KUDELAV, K.; SLIVKA, M.; SARRIS, E.T.; MILLING, D.

Plasmasheet response to multiple substorm activations

09:15 JACQUEY, C.; ROUQUETTE, S.; SAUVAUD, J.A.; POPESCU, D.; REME, H.; KLIMOV, S.I.; ROMANOV, S.A.; LEPPING, R.P.; SIBECK, D.G.; WILLIAMS, D.J.; MCENTIRE, R.W.; KOKUBUN, S.

Large scale dynamics of the magnetotail during substorm expansion: Interball, Geotail, IMP-8 observations

09:30 **YERMOLAEV, YU.I.; BORODKOVA, N.L.; BUDNIK, E.YU.; CHUGUNIN, D.V.; FEDOROV, A.O.; GALPERIN, YU.I.; KOVRAZHNIKIN, R.A.; LUTSENKO, V.N.; MOGILEVSKY, M.M.; NOZDRACHEV, M.N.; PETRUKOVICH, A.A.; PISSARENKO, N.F.; ROMANOV, S.A.; SAVIN, S.P.; SAUVAUD, J.-A.; SKALSKY, A.A.; SMIRNOV, V.N.; STEPANOV, V.A.; ZELENYY, L.M.**

INTERBALL dual-spacecraft observations of serie of substorms on December 22-23, 1997

09:45 **SMETS, R.; DELCOURT, D.C.; SAUVAUD, J.A.**  
Evolution of the electron pitch angle distributions during dipolarization phase of substorms observed by INTERBALL-TAIL

10:00 **HANASZ, J.; SCHREIBER, R.; DE FERAUDY, H.; PERRAUT, S.; LEFEUVRE, F.; SAUVAUD, J.A.; DUBOULOZ, N.; MOGILEVSKY, M.M.; ROMANTSOVA, T.V.**

Observations of the AKR at the entries into the nightside auroral region from Interball-2

10:15 **PERRAUT, S.; ROUX, A.; DUBOULOZ, N.; SAUVAUD, J.A.; POPESCU, D.; MOGILEVSKY, M.**

ULF waves observed in the auroral region by the Interball auroral probe

10:30 **LEFEUVRE, F.; PARROT, M.; RAUCH, J.L.; HANASZ, J.; SCHREIBER, R.; MOGILEVSKY, M.; DE FERAUDY, H.; SAUVAUD, J.A.; DUBOULOZ, N.**

AKR and associated events: first Interball 2 results on propagation characteristics

10:45 **CHUGUNIN, D.V.; GALPERIN, YU.I.; MULIARCHIK, T.M.; ZININ, L.V.; DUBOULOZ, N.; BERTHELIER, J.-J.; MALINGRE, M.**

Distribution functions of the thermal  $H^+$ ,  $He^+$  and  $O^+$  ions in different zones of the magnetosphere

11:00 **EKLUND, U.**  
Plasma composition in the outer high latitude magnetosphere

11:15 **MOGILEVSKY, M.; PARROT, M.; RAUCH, J.L.; PERRAUT, S.; SAUVAUD, J.A.; KOVRAZHNIKIN, R.; JIRICEK, F.; TRISKA, P.; PETROV, V.; BÖSINGER, T.; RIETVELD, M.; ROMANTSOVA, T.; RUSANOV, A.**

Observation of electromagnetic field and plasma in the magnetosphere above Tromsø HF heating facility

11:30 **LUTSENKO, V.N.; KUDELA, K.**  
Almost monoenergetic ions near the Earth's magnetosphere boundaries (Poster)

11:35 **PISSARENKO, N.; LUTSENKO, V.; BORODKOVA, N.; BUDNICK, E.; MOROZOVA, E.; MOSZHUKHINA, A.; PETRUKOVICH, A.; ROMANOV, S.; SANDAHL, I.; SAVIN, S.; YERMOLAEV, YU.**

Observations of energetic particles injection at Interball-Tail probe during substorms in October 22-23, November 14-15 and December 22, 1996

11:50 **END OF SESSION**

12:00 **Business Meetings**

## ST11 New results on the dynamics of the Earth's magnetosphere from the Interball multi-spacecraft missions - Poster Session

Convener: Sauvaud, J.-A.

Co-Convener(s): Zelenyi, L.M.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

ST181 **LUTSENKO, V.N.; KUDELA, K.**

Almost monoenergetic ions near the Earth's magnetosphere boundaries

ST182 **YERMOLAEV, YU.I.; ZASTENKER, G.N.; BORODKOVA, N.L.; KOVRAZHNIKIN, R.A.; NIKOLAEVA, N.S.; NEMECEK, Z.; NOZDRACHEV, M.N.; SAFRANKOVA, J.; SAUVAUD, J.-A.; SKALSKY, A.A.; ZELENYY, L.M.**

Magnetosphere response to magnetic clouds: INTERBALL multi-satellite observations

ST183 **NEMECEK, Z.; SAFRANKOVA, J.; PRECH, L.; ZASTENKER, G.N.; NOZDRACHEV, M.N.; PAULARENA, K.I.; KUDELA, K.**

Variations of the magnetosheath flow

ST184 **SAFRANKOVA, J.; NEMECEK, Z.; PRECH, L.; ZASTENKER, G.; NIKOLAEVA, N.; SKALSKY, A.; SIBECK, D.**

Flank magnetopause position and its variations

ST185 **FEDOROV, A.; FEDDER, J.A.; BUDNICK, E.; RUSSELL, C.T.; SCALSKY, A.; SAVIN, S.**

High latitude magnetopause in the vicinity of cusp during strong northward IMF. Evidence for reconnection

ST186 **MERKA, J.; SAFRANKOVA, J.; NEMECEK, Z.; SANTOLIK, O.; FEDOROV, A.; BORODKOVA, N.; SAVIN, S.; SKALSKY, A.; ROMANOV, S.**

The structure of the cusp-magnetosheath interface under different solar wind conditions

ST187 **NIKUTOWSKI, B.; BÜCHNER, J.; KUSKA, J.-P.; KLIMOV, S.; ROMANOV, S.; SAVIN, S.**

Investigation of a possible longitudinal variation of reconnection signatures using Interball-1 data

ST188 **AMATA, E.; KLIMOV, S.; NOZDRACHEV, M.; ROMANOV, S.; SAVIN, S.; SKALSKY, A.; PETRUKOVICH, A.; ROMANOV, V.; BLECKI, J.; JUCHNIEWICZ, J.; BUECHNER, J.; NIKUTOWSKI, B.; IVCHENKO, V.; KOREPANOV, V.; RAUCH, J.L.; TROTIGNON, J.G.; PARROT, M.; GRARD, R.; RUSTENBACH, J.; TRISKA, P.; VOITA, J.**

Waves and fields as tracers of solar wind energy input to the magnetosphere: Interball-1 results

ST189 **BUDNICK, E.; BORODKOVA, N.; CHUGUNIN, D.; FEDOROV, A.; GALPERIN, YU.; KOSKINNEN, H.; KOVRAZHNIKIN, R.; LUTSENKO, V.; MOGILEVSKY, M.; PETRUKOVICH, A.; PISSARENKO, N.; ROMANTSOVA, T.; SANDAHL, I.; SAUVAUD, J.-A.; SERGEEV, V.; SKALSKY, A.; STEPANOV, V.; YERMOLAEV, YU.; ZASTENKER, G.; ZELENYY, L.**

Strong storm on October 22, 1996: multispacecraft study

**Attend the Poster Session**

- ST190 **YERMOLAEV, YU.I.**; MIFTAHOVA, E.G.; PROKHORENKO, V.I.; ZELENYI, L.M.  
The plasma sheet asymmetry as function of IMF  $B_z$  and  $B_y$ : tail probe observations
- ST191 **BORODKOVA, N.L.**; BUDNICK, E.YU.; GALPERIN, YU.I.; KOVRAZHNIKIN, R.A.; NOZDRACHEV, M.N.; PISSARENKO, N.F.; ROMANOV, S.A.; SAUVAUD, J.-A.; SERGEEV, V.; SKALSKY, A.A.; SMIRNOV, V.N.; VLADIMIROVA, G.A.; ZASTENKER, G.N.; ZELENYI, L.M.  
Multi-satellite observations of the substorm dynamics during the event on November 14, 1996
- ST192 **KOPERSKI, P.**; SAUVAUD, J.-A.; SMETS, R.; DELCOURT, D.; ROMANOV, S.; BORODKOVA, N.  
Observations of electron pitch angle distributions in the nightside magnetosphere for different phases of a substorm
- ST192A **BLECKI, J.**; KOSSACKI, K.; WRONOWSKI, R.; NEMECEK, Z.; SAFRANKOWA, J.; SAVIN, S.; SAUVAUD, J.A.; ROMANOV, S.; JUCHNIEWICZ, J.; KLIMOV, S.; TRISKA, P.; SMILAUER, J.; SIMUNEK, J.  
VLF plasma wave observations in the polar cusp onboard MAGION-4 Interball-1 subsatellite
- ST192B **MALINGRE, M.**; DUBOULOZ, N.; BERTHELIER, J.J.; GALPERIN, Y.; CHUGUNIN, D.; MULARCHIK, T.; ZININ, L.; SAUVAUD, J.A.  
Signatures of the soft electron precipitation region at the poleward boundary of the nightside auroral oval: INTERBALL AP observations
- ST192C **SANTOLIK, O.**; SAFRANKOVA, J.; NEMECEK, Z.; PRECH, L.  
Statistical study of particle fluxes in the magnetosphere
- ST192D **KOVRAZHNIKIN, R.A.**; SAUVAUD, J.-A.; DELCOURT, D.C.  
Gaps in the ion spectra in the inner magnetosphere
- ST192E **VESELOV, M.V.**; GALPERIN, YU.L.; AFONIN, V.V.; TORKAR, K.; RIEDLER, W.; PEDERSEN, A.; PERRAUT, S.  
On the Interball-2 electric potential

- 10:30 **LAPENTA, G.**; BRACKBILL, J.U.  
Three dimensional study of reconnection in the Earth's magnetotail
- 10:45 BREAK

Chairperson: Schindler, K.

- 11:15 **CHANTEUR, G.**  
The stability of thin current layers form bidimensional hybrid simulations (Solicited Paper)
- 11:45 **SCHOLER, M.**; KUCHAREK, H.; TERASAWA, T.  
Injection and acceleration of pickup ions at interplanetary shocks (Solicited Paper)
- 12:15 **MANN, G.**  
Electron acceleration at shock waves in the heliosphere (Solicited Paper)
- 12:45 **SALEM, C.**; MANGENEY, A.  
Vlasov simulations of very weak double layers; application to the solar wind
- 13:00 LUNCH

Chairperson: Bingham, R.

- 14:00 **DELCOURT, D.C.**  
Nongyrotropic ion distributions in the near-Earth magnetotail (Solicited Paper)
- 14:30 **CHAPMAN, S.C.**; ROWLANDS, G.; YNNERMAN, A.; TSALAS, M.  
Stochasticity and trapping in single particle dynamics in slow and fast varying reversals (Solicited Paper)
- 15:00 **BÜCHNER, J.**; KUSKA, J.-P.; WILKEN, B.; ZONG, Q.  
Remote determination of reconnection parameters by the energetic  $H^+$ ,  $He^{++}$  and  $O^+$  ion spectra
- 15:15 **IP, W.-H.**  
Saturn's thermal plasma and neutral cloud-ring complex (Solicited Paper)
- 15:45 **MONCUQUET, M.**; MEYER-VERNET, N.; HOANG, S.  
Modelling collisionless plasma near a potential well: the examples of the Io plasma torus
- 16:00 **MAZELLE, C.**; BELMONT, G.; CAO, J.B.  
Stationary nongyrotropy near comets (Solicited Paper)
- 16:30 END OF PART I

## ST12 Theory and simulations of solar system plasmas I

Convener: Büchner, J.  
Co-Convener(s): Belmont, G.  
**Thursday, 23 April 1998**  
Lecture Room: M8  
Chairperson: Belmont, G.

- 09:00 **SCHINDLER, K.**  
Nonlinear dynamics aspects of magnetospheric activity (Solicited Paper)
- 09:30 **WIECHEN, H.**  
New aspects of plasma sheet dynamic: MHD and kinetic theory (Solicited Paper)
- 10:00 **BÜCHNER, J.**; KUSKA, J.-P.  
Substorm onset as a transition to globally coherent reconnection
- 10:15 **KUSKA, J.-P.**; BÜCHNER, J.  
PIC-code studies of reconnection in two and three dimensions

## ST12 Theory and simulations of solar system plasmas - Poster Session

Convener: Büchner, J.  
Co-Convener(s): Belmont, G.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 3 - ST

- ST211 **HEINEMANN, M.**; ERICKSON, G.M.  
Field-aligned currents and parallel electric fields in the plasma sheet boundary layer
- ST212 **BUCKLEY, A.M.**; GOUGH, M.P.; MOUKIS, C.G.; CHAPMAN, S.C.; ALLEYNE, H.; YEARBY, K.H.; WATKINS, N.W.  
Wave-particle interactions to be measured by Cluster: modelling the DWP particle correlator
- ST213 **SAUER, K.**; DUBININ, E.; BAUMGÄRTEL, K.; TARASOV, V.  
Low-frequency electromagnetic waves caused by small-scale bio-ion interaction

- ST214 **ROTH, I.**; TEMERIN, M.; HUDSON, M.; REEVES, G.  
Resonant enhancement of relativistic electron fluxes in geomagnetic storms
- ST215 **WODNICKA, E.B.**  
Solar wind - Earth magnetospheric coupling
- ST216 **WIJK, J.E.**; **SCHMIEDER, B.**; **SIMNETT, G.**  
Relationship between CME and prominence
- ST217 **CHUST, T.**; **LE QUEAU, D.**  
Kinetic model of Alfvén wave light-ion gyroresonance heating

## ST12 Theory and simulations of solar system plasmas II

Convener: Büchner, J.  
Co-Convener(s): Belmont, G.  
**Friday, 24 April 1998**  
Lecture Room: M8  
Chairperson: Delcourt, D.

- 09:00 **MOTSCHMANN, U.**; **GLASSMEIER, K.-H.**  
Concerning nongyrotropic particle distributions in space plasmas (Solicited Paper)
- 09:30 **BRINCA, A.**  
Stability of stationary and time-varying nongyrotropic particle distributions (Solicited Paper) \*
- 10:00 **BINGHAM, R.**; **SHAPIRO, V.**; **DAWSON, J.M.**; **KELLETT, B.J.**  
Solar wind interaction with cometary plasmas: consequences for the problem of the cometary X-ray emission (Solicited Paper)
- 10:30 BREAK

Chairperson: Delcourt, D.

- 11:00 **FARIA JR.**; **R.T.**; **SHUKLA, P.K.**; **MIRZA, A.M.**  
Nonlinear Alfvén waves in multi-ion plasmas (Solicited Paper)
- 11:30 **STASIEWICZ, K.**  
Kinetic/inertial Alfvén waves in the Earth's magnetosphere (Solicited Paper)
- 12:00 **GENOT, V.**; **LOUARN, P.**; **LEQUEAU, D.**  
Small scale density gradients as preferential sites for the dissipation of Alfvén wave poynting flux
- 12:15 **VOM ENDT, A.**; **SCHLEGEL, K.**  
Implicit PIC simulations of the Farley-Buneman instability
- 12:30 **REZEAU, L.**; **BELMONT, G.**; **REBERAC, F.**  
Resonant amplification of magnetosheath waves at magnetopause: magnetic field effects
- 12:45 LUNCH

Chairperson: Büchner, J.

- 14:00 **AXFORD, W.I.**; **MCKENZIE, J.**  
Heating of the solar corona (Solicited Paper) \*
- 14:30 **PRIEST, E.R.**; **GALSGAARD, K.**  
Heating the solar corona by magnetic reconnection (Solicited Paper) \*
- 15:00 **BREUS, T.K.**; **KRYMSKII, A.M.**; **BOJSKOV, D.I.**; **AXFORD, W.I.**  
Two-dimensional models of the coronal magnetic field

- 15:15 **INNES, D.**  
Simulation of small-scale explosive events on the Sun \*
- 15:30 BREAK

Chairperson: Büchner, J.

- 16:00 **TRAKHTENGERTS, V.Y.**  
A new mechanism of a solar flare (Solicited Paper)
- 16:30 **LEMAIRE, J.F.**  
Convective instability in the outer plasmasphere (Solicited Paper)
- 17:00 **KRASNOSELSKIKH, V.**; **LEFEBVRE, B.**  
Statistical properties of amplitudes and phases in the ensemble of interacting waves (Solicited Paper)
- 17:30 **BERTHOMIER, M.**; **POTTELETTE, R.**; **TREUMANN, R.**  
Parametric study of kinetic Alfvén solitons in a two electron temperature plasma
- 17:45 **TUR, A.V.**; **MAURICE, S.**; **BLANC, M.**; **YANOVSKY, V.V.**  
Exact and approximative solutions of the plasma equilibrium within the magnetic field of a punctual dipole
- 18:00 **SOMOV, B.V.**  
Theory and simulation of 3D reconnection in solar flares
- 18:15 END OF SESSION

## ST13 The Sun: SOHO and related results I Plasma diagnosis of the solar atmosphere by photon spectroscopy and remote particle measurements I

Convener: Hilchenbach, M.  
Co-Convener(s): Hansteen, V.  
**Tuesday, 21 April 1998**  
Lecture Room: M5  
Chairperson: Hansteen, V.

- 14:00 **AXFORD, W.I.**  
Coronal heating and the origin of the fast solar wind (Solicited Paper)
- 14:30 **LEER, E.**  
Solar wind theory - in light of recent observations (Solicited Paper)
- 15:00 **MANN, G.**; **CLASSEN, H.-T.**; **AURASS, H.**; **KLASSEN, A.**; **KUNOW, H.**; **DRÖGE, W.**  
Highly energetic electrons accelerated by coronal shock waves
- 15:15 **KLECKER, B.**; **MÖBIUS, E.**; **BOGDANOV, A.T.**; **HOVESTADT, D.**; **KISTLER, L.M.**; **POPECKI, M.A.**; **LUND, E.J.**; **HEIRTZLER, D.**  
Temperature of the source region as derived from high resolution ionic charge measurements with SEPICA/ACE
- 15:30 **BOTHMER, V.**; **ST. CYR, C.**; **CLASSEN, H.-T.**; **POSNER, A.**; **HOWARD, R.A.**; **KUNOW, H.**; **MANN, G.**; **MÜLLER-MELLIN, R.**; **WIBBERENZ, G.**  
Electron acceleration in the onset phase of coronal mass ejections: implications for the structure of the solar corona from observations of the SOHO spacecraft and ground based radiowave measurements
- 15:45 **SPADARO, D.**  
SOHO observations of the outer solar atmosphere: status and prospects (Solicited Paper)

- 16:15 WILHELM, K.; MARSCH, E.; DWIVEDI, B.N.; HASSLER, D.M.; LEMAIRE, P.; GABRIEL, A.; HUBER, M.C.E.

The solar corona above polar coronal holes seen by SUMER on SOHO

- 16:30 MARSCH, E.; TU, C.-Y.; WILHELM, K.; CURDT, W.

Ion temperatures in a solar polar coronal hole observed by SUMER on SOHO

- 16:45 POLETTI, G.; UVCS TEAM

UVCS observations of polar regions

- 17:00 ORLANDO, S.; PERES, G.

Effects of plasma flows confined in coronal loops on SOHO observations

- 17:15 END OF PART I

### ST13 The Sun: SOHO and related results .1 Plasma diagnosis of the solar atmosphere by photon spectroscopy and remote particle measurements II

Convener: Hilchenbach, M.

Co-Convener(s): Hansteen, V.

Wednesday, 22 April 1998

Lecture Room: M5

Chairperson: Spadaro, D.

- 09:00 HIBBERT, A.

The provision of atomic data and estimations of accuracy (Solicited Paper)

- 09:30 BODMER, R.

The electron temperature in the solar corona and charge states in the solar wind (Solicited Paper)

- 10:00 AELLIG, M.R.; BOCHSLER, P.; GRÜN WALDT, H.; HEFTI, S.; WURZ, P.; HILCHENBACH, M.; HOVESTADT, D.; IPAVICH, F.M.; GLIEM, F.

The influence of suprathermal electrons on the derivation of coronal electron temperatures from solar wind minor ion charge state spectra obtained from SOHO/CELIAS/CTOF

- 10:15 BOCHSLER, P.; BODMER, R.

Isotope fractionation processes in the solar wind

- 10:30 KALLENBACH, R.; IPAVICH, F.M.; KUCHARSK, H.; BOCHSLER, P.; GEISS, J.; GLIEM, F.; GLOECKLER, G.; GALVIN, A.B.; GRÜN WALDT, H.; HILCHENBACH, M.; HOVESTADT, D.

Solar wind isotopic abundance ratios of Ne, Mg, and Si measured by SOHO/CELIAS/MTOF as diagnostic tool for the inner solar corona

- 10:45 GRÜN WALDT, H.; HILCHENBACH, M.; MARSCH, E.; BOCHSLER, P.

The search with CELIAS/CTOF for  $O^{5+}$  as a solar wind constituent

- 11:00 WURZ, P.; IPAVICH, F.M.; BOCHSLER, P.; AELLIG, M.R.; HEFTI, S.; KALLENBACH, R.; GALVIN, A.B.; GRÜN WALDT, H.; HILCHENBACH, M.

The silicon, oxygen, and iron abundance in the solar wind

- 11:15 HEFTI, S.; BOCHSLER, P.; GRÜN WALDT, H.; AELLIG, M.R.; IPAVICH, F.M.; HILCHENBACH, M.; WURZ, P.; HOVESTADT, D.

Kinetic properties of oxygen, silicon, and iron ions measured with SOHO/CELIAS

- 11:30 END OF SUB-SESSION

- 12:00 Business Meetings

### ST13 The Sun: SOHO and related results .2 Multi-wavelength observations of solar atmospheric structure, evolution and eruptions I

Convener: Harrison, R.A.

Co-Convener(s): Delaboudiniere, J.-P.

Wednesday, 22 April 1998

Lecture Room: M5

Chairperson: Harrison, R.A.

- 14:00 MACPHERSON K.P.; JORDAN, C.

Studies of helium line formation in the solar transition region based on SOHO JOP 62

- 14:15 JORDAN, S.; ANDRETTA, V.; GARCIA, A.

A lower limit on nonthermal velocities of quiet-Sun He II ions

- 14:30 WIKSTOL, O.; HANSTEEN, V.H.; MALTBY, P.; KJELDSETH-MOE, O.; JUDGE, P.G.; WILHELM, K.; TARBELL, T.D.

Time variations and dynamics of the quiet Sun transition region

- 14:45 IP, W.-H.; DAMMASCH, I.E.; WILHELM, K.; TARBELL, T.D.

Correlative study of coronal and transition region emission patterns with the magnetic field structure using SOHO observations (Solicited Paper)

- 15:15 HARRISON, R.A.

Quiet Sun transient activity: blinkers, explosive events and the magnetic carpet

- 15:30 BRYNILDSEN, N.; BREKKE, P.; HAUGAN, S.V.H.; KJELDSETH-MOE, O.; MALTBY, P.; WIKSTOL, O.

Bright EUV sunspot plumes exist

- 15:45 ALETTI, V.; BOCCHIALINI, K.; VIAL, J.C.

Multi-wavelength analysis of intensity distribution in bright points

- 16:00 PATZOLD, M.; BIRD, M.K.

Polar plumes and fine-scale coronal structures - on the interpretation of coronal radio sounding data

- 16:15 ARTZNER, G.

Four wavelengths 3D geometry of solar structures

- 16:30 END OF PART I

### ST13 The Sun: SOHO and related results .2 Multi-wavelength observations of solar atmospheric structure, evolution and eruptions - Poster Session

Convener: Harrison, R.A.

Co-Convener(s): Delaboudiniere, J.-P.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

- ST219 GARCIA, A.; JORDAN, S.; BROSIUS, J.; ANDRETTA, V.

Observational support for "velocity redistribution" of the He II ions

- ST220 BREKKE, P.; THOMPSON, W.T.; WOODS, T.; EPARVIER, F.

The EUV solar irradiance spectrum observed with CDS on SOHO

- ST222 VERNETA, A.I.

Three dimensional magnetic reconnection in a light of XUV lines analysis

# ST13 The Sun: SOHO and related results .2 Multi-wavelength observations of solar atmospheric structure, evolution and eruptions II

Convener: Harrison, R.A.  
Co-Convener(s): Delaboudiniere, J.-P.  
**Thursday, 23 April 1998**  
Lecture Room: M5  
Chairperson: Harrison, R.A.

- 09:00 **LANG, K.R.; WILLSON, R.F.**  
VLA and SOHO observations of solar activity (Solicited Paper)  
09:30 **KJELDSETH-MOE, O.; BREKKE, P.; HAUGAN, S.V.H.; WIKSTOL, O.**  
Rapid time variation and strong dynamics of loops in active regions  
09:45 **BREKKE, P.; BRYNILDSEN, N.; KJELDSETH-MOE, O.; MALBY, P.; WILHELM, K.**  
Multiple flows in the active region NOAA 7995  
10:00 **BREAK**

Chairperson: Harrison, R.A.

- 10:45 **VAN DRIEL-GESZTELYI, L.; SCHMIEDER, B.; MARTENS, P.C.H.; ZARRO, D.; DEFOREST, C.; THOMPSON, B.; AULANIER, G.; DEMOULIN, P.; STCYR, C.; KUCERA, T.; BURKEPILE, J.T.; WHITE, O.R.; HANAOKA, Y.; NITTA, N.; MEIN, P.; MALHERBE, J.M.**  
Ground-based and space-based multi-instrument observations of the disparition brusque and CME activity of 25/26 September 1996 (Solicited Paper)  
11:15 **ANDREWS, M.D.; STRACHAN, L.; RAYMOND, J.C.; FINESCHI, S.; O'NEAL, R.; KOHL, J.L.; MORRIL, J.S.; HOWARD, R.A.; MODIGLIANI, A.; NOCI, G.; BIESECKER, D.A.; SCHWENN, R.; LAMY, P.L.**  
LASCO and UVCS observations and characterization of streamer CME on 13-14 August 97  
11:30 **STRACHAN, L.; RAYMOND, J.C.; FINESCHI, S.; O'NEAL, R.; KOHL, J.L.; MODIGLIANI, A.; NOCI, G.; ANDREWS, M.D.; MORRIL, J.S.; HOWARD, R.A.**  
Comparison of outflow velocity determinations with UVCS and LASCO for the coronal mass ejection jof 13-14 August 1997  
11:45 **INNES, D.E.; INHESTER, B.; HARRISON, R.; MATTHEWS, S.; NOENS, J.C.; SCHMIEDER, B.**  
Observations of an erupting prominence  
12:00 **DELANNEE, C.; DELABOUDINIÈRE, J.P.**  
Classification of coronal mass ejections in regards to the SOHO new view  
12:15 **HASSLER, D.M.; DAMMASCH, I.; LEMAIRE, P.; WILHELM, K.**  
Solar coronal hole outflow velocities and the chromospheric network \*  
12:30 **PICK, M.; MAIA, D.; HOWARD, R.; LAMY, P.; SCHWENN, R.**  
Coronal mass ejections and large scale structure of the corona \*  
12:45 **KUZHEVSKII, B.M.; TROITSKAIA, E.V.**  
Absorption of gamma-rays and diagnosis of solar plasma density altitude profile from the time dependence of solar flare gamma-line  
13:00 **END OF SESSION**

# ST14 Solar imprints in terrestrial archives (co-sponsored by OA)

Convener: Cini-Castagnoli, G.  
**Friday, 24 April 1998**  
Lecture Room: M4  
Chairperson: N.N.

- 14:00 **SVENSMARK, H.**  
Earth's cloud cover and cosmic ray flux variations  
14:15 **BEER, J.; MASARIK, J.**  
Reconstruction of the solar activity based on the analysis of cosmogenic radionuclides in ice cores  
14:30 **CHARVATOVA, I.**  
The basic 180-yr and 2200-yr cycles in the solar motion  
14:45 **CECCHINI, S.; GALLI, M.; NANNI, T.; PAGLIARIN, A.**  
Results of cyclogram analysis of El Nino occurrences to search for possible phase relationship with solar activity  
15:00 **CINI-CASTAGNOLI, G.; BERNASCONI, S.; BONINO, G.; DELLA MONICA, P.; TARICCO, C.**  
Solar variability imprinted in the  $\delta^{18}\text{O}$  time series of a shallow water Mediterranean core  
15:15 **MÖRNER, N.-A.**  
Solar wind variations and terrestrial responses  
15:30 **END OF SESSION**

# ST15 Atmospheric ozone (co-sponsored by OA) .1 Modelling and validation with satellite data I

Convener: Vardavas, I.M.  
Co-Convener(s): Taylor, F.W.  
**Wednesday, 22 April 1998**  
Lecture Room: M7  
Chairperson: Taylor, F.W.  
Editors: Taylor, F.W.; Vardavas, I.M.

- 14:00 **KANAKIDOU, M.; DENTENER, F.J.; BERNSTEN, T.K.; COLLINS, W.J.; HAUGLUSTAINE, D.A.; HOUWELING, S.; ISAKSEN, I.; KROL, M.; LAWRENCE, J.G.; MULLER, J.F.; POISSON, N.; ROELOFS, G.J.; WANG, Y.; WAUBEN, W.M.F.; LEVY, C.**  
3-D global simulations of tropospheric  $\text{O}_3$  budget - results of the GIM/IGAC intercomparison 1997 exercise (Solicited Paper)  
14:30 **CLERBAUX, C.; HAUGLUSTAINE, D.; MILLER, J.F.; GRANIER, C.**  
Tropospheric ozone and its precursors: IMG measurements and atmospheric models  
14:45 **KNIGHT, J.R.; AUSTIN, J.; BUTCHART, N.**  
Simulation of stratospheric constituents in a unified climate/forecast model  
15:00 **LEVELT, P.F.; KHATTATOV, B.V.; TIE, X.X.; BRASSEUR, G.P.; GILLE, J.C.; KELDER, H.**  
Assimilation of the UARS/MLS ozone measurements in a 3-D stratospheric chemistry transport model  
15:15 **BLAISON, D.; KARCHER, F.**  
Inversion of ozone profiles from high resolution IASI spectra  
15:30 **NOEL, S.; BOVENSMANN, H.; BURROWS, J.P.; FRERICK, J.; CHANCE, K.V.; GOEDE, A.H.P.**  
Global atmospheric monitoring with SCIAMACHY (Solicited Paper)

ST



16:00 VARDAVAS, I.M.; VLASTOU, G.  
 ST15.1- The role of water vapour photodissociation on  
 007 mesopause ozone  
 16:15 BRÜHL, CH.; INGHAM, T.  
 ST15.1- Effect of HOBr on catalytic destruction of ozone in  
 008 the lower stratosphere of midlatitudes, model studies  
 initialized with UARS/HALOE data  
 16:30 BARON, PH.; RICAUD, PH.; DE LA NOE, J.  
 ST15.1- Measurement of middle atmospheric trace gases  
 009 from the sub-millimeter radiometer instrument  
 aboard the Odin satellite  
 16:45 PUTZ, E.; PFISTER, G.  
 ST15.1- Sensitivity of photolysis rates  $J(O_1D)$  and  $J(NO_2)$  to  
 010 different atmospheric conditions  
 17:00 END OF PART I

## ST15 Atmospheric ozone (co-sponsored by OA)

### .1 Modelling and validation with satellite data II

Convener: Vardavas, I.M.  
 Co-Convener(s): Taylor, F.W.  
 Thursday, 23 April 1998  
 Lecture Room: M7  
 Chairperson: Vardavas, I.M.  
 Editors: Taylor, F.W.; Vardavas, I.M.

08:30 GUIRLET, M.; KECKHUT, P.; GODIN, S.;  
 ST15.1- MEGIE, G.  
 011 Long-term monitoring of stratospheric ozone at the  
 Observatoire de Haute-Provence using ground-based  
 and satellite instruments (Solicited Paper)  
 09:00 ESKES, H.J.; PETERS, A.J.M.; LEVELT, P.F.;  
 ST15.1- ALLAART, M.A.F.  
 012 Variational assimilation of ozone total column  
 satellite data in a 2D lat-lon tracer-transport model  
 09:15 TEYSSEDRE, H.; DE RUDDER, A.; LEFEVRE,  
 ST15.1- F.; SIMON, P.  
 013 Climatology of the REPROBUS Chemistry-Transport  
 Model coupled to the ARPEGE General Circulation  
 Model  
 09:30 JAMES, P.M.  
 ST15.1- The wind field structure around ozone mini-holes: a  
 014 Lagrangian perspective  
 09:45 DAMERIS, M.; GREWE, V.; HEIN, R.;  
 ST15.1- SCHNADT, C.; BRÜHL, C.; STEIL, B.  
 015 Calculating the future development of the ozone  
 layer with a dynamic-chemical GCM  
 10:00 ENTZIAN, G.; PETERS, D.  
 ST15.1- Annual variation of the statistical link between  
 016 zonally asymmetric total ozone trend and decadal  
 change in dynamics  
 10:15 BERTAUX, J.L.; HAUCHECORNE, A.; MANGIN,  
 ST15.1- A.; COT, C.; TALAGRAND, O.; SIMON, P.;  
 017 KYRÖLÄ, E.; ROSCOE, H.; HEMBISE, O.;  
 BRASSEUR, G.P.  
 The MSDOL project: assimilation of GOMOS ozone  
 data in a 3-D chemistry-transport model

### 10:30 Poster Summaries

ST15.1- ELANSKY, N.F.; POSTYLYAKOV, O.V.; MITIN,  
 018 I.V.  
 Application of Monte Carlo simulation of multi  
 scattering radiation transfer to error analysis of  
 extended Brewer Umkehr method for ozone profile  
 determination

ST15.1- PAPAYANNIS, A.; PORTENEUVE, J.; BALIS, D.;  
 019 ZEREFOS, C.; GALANI, E.  
 Design of a new dial system for tropospheric and  
 lower stratospheric ozone monitoring in northern  
 Greece  
 ST15.1- LEZEAUX, O.; DE LA NOE, J.; RICAUD, PH.;  
 020 PETER, R.; CALISESI, Y.; GODIN, S.; WATERS,  
 J.W.; FROIDEVAUX, L.; CHIPPERFIELD, M.  
 Validation of ground-based microwave measure-  
 ments at the Bordeaux Observatory, France  
 ST15.1- BONASONI, P.; EVANGELISTI, F.; BONAFA, U.;  
 021 FELDMANN, H.; MEMMESHEIMER, M.; STHOL,  
 A.; TOSITTI, L.; KROMP-KOLB, L.H.  
 Stratosphere-troposphere exchange: case studies  
 recorded at Mt. Cimone during VOTALP project  
 ST15.1- BRAMSTEDT, K.; WEBER, M.; ROZANOV, V.;  
 022 HOOGEN, R.; DE BEEK, R.; BURROWS, J.P.;  
 EICHMANN, K.-U.  
 Ozone vertical distributions from GOME/ERS-2  
 satellite data - II: observations in the arctic winters  
 1996/97 and 97/98  
 ST15.1- ROZANOV, V.; BRAMSTEDT, K.; EICHMANN,  
 023 K.-U.; WEBER, M.; DE BEEK, R.; BURROWS,  
 J.P.; HOOGEN, R.  
 Ozone vertical distributions with GOME/ERS-2  
 satellite data - I: comparison with independent  
 measurements  
 ST15.1- ROZANOV, E.; ZUBOV, V.; SCHLESINGER, M.;  
 024 YANG, F.; ANDRONOVA, N.  
 Three-dimensional simulations of ozone in the  
 stratosphere and comparison with UARS data  
 ST15.1- EGOROVA, T.; ZUBOV, V.; YAGOVKINA, S.;  
 025 ROZAVOV, E.  
 Simulation of the atmospheric ozone distributions  
 with the 2-D model and validations with HALOE  
 and TOMS data  
 ST15.1- EGOROVA, T.; ZUBOV, V.; YAGOVKINA, S.;  
 026 ROZAVOV, E.  
 Lightning production of  $NO_x$  and atmospheric ozone  
 ST15.1- ORSOLINI, Y.J.; STEPHENSON, D.B.;  
 027 DOBLAS-REYES, F.J.  
 Storm track signature in total ozone during the  
 northern hemisphere winter  
 ST15.1- ILYUSHIN, Y.A.; TEREKHOVA, O.A.  
 030 Approximate limb sounding data inversion

Stand-by papers  
 LANGEN, J.

ST15.1- Stratospheric chemistry and climate research using a  
 028 limb sounding infrared spectrometer - the MIPAS  
 instrument onboard ENVISAT \*  
 LANGEN, J.  
 ST15.1- Ozone monitoring from space using the star  
 029 occultation technique - the GOMOS instrument  
 onboard ENVISAT \*

11:00 END OF SESSION

## Physics and Chemistry of the Earth

If you intend to organize an event at a larger meeting, a  
 workshop or topical conference within geology, geochemis-  
 try, geophysics, hydrology, oceanography or atmospheric  
 and planetary and space sciences, please consider *PCE* for  
 the publication of your proceedings.

**ST15 Atmospheric ozone (co-sponsored by OA)**  
**.1 Modelling and validation with satellite data - Poster Session**

Convener: Vardavas, I.M.  
 Co-Convener(s): Taylor, F.W.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: AGORA 3 - ST  
 Chairperson: N.N.  
 Editors: Taylor, F.W.; Vardavas, I.M.

- ST019 ELANSKY, N.F.; POSTYLYAKOV, O.V.;  
 ST15.1-018 MITIN, I.V.  
 Application of Monte Carlo simulation of multi scattering radiation transference to error analysis of extended Brewer Umkehr method for ozone profile determination
- ST020 PAPAYANNIS, A.; PORTENEUVE, J.; BALIS, D.; ZEREFOS, C.; GALANI, E.  
 ST15.1-019 Design of a new dial system for tropospheric and lower stratospheric ozone monitoring in northern Greece
- ST021 LEZEAUX, O.; DE LA NOE, J.; RICAUD, PH.; PETER, R.; CALISESI, Y.; GODIN, S.; WATERS, J.W.; FROIDEVAUX, L.; CHIPPERFIELD, M.  
 ST15.1-020 Validation of ground-based microwave measurements at the Bordeaux Observatory, France
- ST022 BONASONI, P.; EVANGELISTI, F.; BONAFE, U.; FELDMANN, H.; MEMMESHEIMER, M.; STHOL, A.; TOSITTI, L.; KROMP-KOLB, L.H.  
 ST15.1-021 Stratosphere-troposphere exchange: case studies recorded at Mt. Cimone during VOTALP project
- ST023 BRAMSTEDT, K.; WEBER, M.; ROZANOV, V.; HOOGEN, R.; DE BEEK, R.; BURROWS, J.P.; EICHMANN, K.-U.  
 ST15.1-022 Ozone vertical distributions from GOME/ERS-2 satellite data - II: observations in the arctic winters 1996/97 and 97/98
- ST024 ROZANOV, V.; BRAMSTEDT, K.; EICHMANN, K.-U.; WEBER, M.; DE BEEK, R.; BURROWS, J.P.; HOOGEN, R.  
 ST15.1-023 Ozone vertical distributions with GOME/ERS-2 satellite data - I: comparison with independent measurements
- ST025 ROZANOV, E.; ZUBOV, V.; SCHLESINGER, M.; YANG, F.; ANDRONOVA, N.  
 ST15.1-024 Three-dimensional simulations of ozone in the stratosphere and comparison with UARS data
- ST026 EGOROVA, T.; ZUBOV, V.; YAGOVKINA, S.; ROZAVOV, E.  
 ST15.1-025 Simulation of the atmospheric ozone distributions with the 2-D model and validations with HALOE and TOMS data
- ST027 EGOROVA, T.; ZUBOV, V.; YAGOVKINA, S.; ROZAVOV, E.  
 ST15.1-026 Lightning production of NO<sub>x</sub> and atmospheric ozone
- ST028 ORSOLINI, Y.J.; STEPHENSON, D.B.; DOBLAS-REYES, F.J.  
 ST15.1-027 Storm track signature in total ozone during the northern hemisphere winter
- ST028A ILYUSHIN, Y.A.; TEREKHOVA, O.A.  
 ST15.1-30 Approximate limb sounding data inversion

**ST15 Atmospheric ozone (co-sponsored by OA)**  
**.2 Polar ozone**

Convener: Krivolutsky, A.A.  
**Thursday, 23 April 1998**  
 Lecture Room: M7  
 Chairperson: Krivolutsky, A.A.

- 11:30 STOWASSER, M.; OELHAF, H.; WETZEL, G.; FISCHER, H.; FRIEDL-VALLON, F.; MAUCHER, G.; SEEFELDNER, M.; TRIESCHMANN, O.; V. CLARMANN, T.  
 Stratospheric arctic winter profiles of N<sub>2</sub>O, CH<sub>4</sub>, H<sub>2</sub>O and HDO, measured by MIPAS-B
- 11:45 MULLER, K.P.; BAUMGARTEN, G.; SIEBERT, J.; FRICKE, K.H.  
 Lidar observations of lee wave induced PSCs above esrange in northern Sweden
- 12:00 FIERLI, F.; HACUHECORNE, A.; MEHRTENS, H.  
 PSC lidar measurements interpretation by a Mie model
- 12:15 RENARD, J.B.; PAYAN, S.; CAMY-PEYRET, C.; HAWAT, T.; HUGUENIN, D.; JESECK, P.; KANZAWA, H.; LEFEVRE, F.; PIRRE, M.; ROBERT, C.; SASANO, Y.  
 NO<sub>2</sub> balloon-borne measurements during the ILAS validation campaign
- 12:30 FRANKE, B.; KLEIN, U.; KÜNZI, K.F.; LANGER, J.; SINNHUBER, B.-M.; WOHLTMANN, I.  
 Measurements of stratospheric ozone and chlorine monoxide over Ny-Ålesund, Spitsbergen, in 1997 and 1998
- 12:45 AIKIN, A.C.; MORRIS, G.A.  
 Polar ozone as observed by ADEOS ILAS and TOMS instruments
- 13:00 LUNCH
- Chairperson: Baier, F.
- 14:00 KRIVOLUTSKY, A.; VARGIN, P.  
 QBO variability of total ozone for Antarctic springs and its relation to planetary waves intensity
- 14:15 GÜNTHER, G.; BAIER, F.  
 Simulation of the dynamics and chemistry of the Arctic stratosphere during the winters 1995/96 and 1996/97
- 14:30 ENELL, C.F.; MEIER, A.; STEEN, A.; COORAY, V.; WAGNER, T.; PFEILSTICKER, K.; PLATT, U.; JOHNSTON, P.  
 A discussion on the variability of atmospheric trace gas concentrations and other high latitude phenomena
- 14:45 LEFEVRE, F.; CARSLAW, K.S.; PETER, T.  
 The 1998 Arctic ozone depletion quantified from three-dimensional model simulations
- 15:00 ROZANOV, E.; ZUBOV, V.; SCHLESINGER, M.; YANG, F.; ANDRONOVA, N.  
 Simulation of the annual cycle of total ozone over northern high latitudes and comparison with TOMS data
- 15:15 BECKER, G.; MÜLLER, R.; MCKENNA, D.S.; REX, M.  
 Modeled ozone loss in the Arctic stratosphere in comparison to results of the Match experiments

ST

- 15:30 **VAN DEN BROEK, M.M.P.**; GOEDE, A.; BREGMAN, A.; LELIEVELD, J.  
Stratospheric chemistry modelling: results of a box model and a three-dimensional chemistry transport model
- 15:45 **KNUDSEN, B.M.**; LAHOZ, W.A.; O'NEILL, A.; MORCRETTE, J.-J.  
Evidence for a substantial role for dilution in northern mid-latitude ozone depletion
- 16:00 **FLENTJE, H.**; RENGGER, W.; WIRTH, M.; O'NEILL, A.; LAHOZ, W.A.; HEAPS, A.  
Comparison of airborne lidar measurements with high resolution tracer transport models
- 16:15 **KRIVOLUTSKY, A.**  
Concluding remarks
- 16:30 **END OF SESSION**

## **ST15 Atmospheric ozone (co-sponsored by OA) .2 Polar ozone - Poster Session**

Convener: Krivolutsky, A.A.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: AGORA 3 - ST

Chairperson: Krivolutsky, A.A.

- ST029 **SHUMILOV, O.I.**; KASATKINA, E.A.; **RASPOPOV, O.M.**  
Tropospheric ozone recording in high latitudes
- ST030 **BOJKOV, B.R.**; BEINE, H.J.  
Ozone measurements in the lower troposphere over Ny-Ålesund, Svalbard (78°55'N, 11°53'E)
- ST031 **SPICHTINGER-RAKOWSKY, N.**; FABIAN, P.  
The thermal structure of the Antarctic lower stratosphere before and after the detecting of the ozone hole
- ST032 **REDAELLI, G.**; MACKENZIE, A.R.; RIZI, V.; VISCONTI, G.; CHIPPERFIELD, M.P.; RUDAKOV, V.V.; STEFANUTTI, L.  
Transport related O<sub>3</sub> variations during the airborne polar experiment
- ST033 **JADIN, E.A.**; **KADYGROV, V.E.**; DIANSKY, N.A.  
Analysis of interannual variations in total ozone and stratospheric circulation
- ST034 **BELOGOLOV, V.S.**  
Total ozone content over Murmansk
- ST035 **KIVI, R.**; KYRÖ, E.; RONTU, L.; WEDEKIND, C.; STEIN, B.; WILLE, H.; DÖRNBRACK, A.; MITEV, V.; MATTHEY, R.; ROSEN, J.; RIZI, V.; LAZZAROTTO, B.; CALPINI, B.; STEFANUTTI, L.; DEL GUASTA, M.  
Polar stratospheric cloud measurements by lidar and balloon borne sondes at Sodankylä in 1996/1997
- ST036 **ZAHARIEV, V.**; KOLEV, S.I.; GERNANDT, H.  
About the changes of the ozone content over the east Antarctica

## **ST15 Atmospheric ozone (co-sponsored by OA) .3 Changes in UV-B radiation - Poster Session**

Convener: Krüger, B.C.

Display Time: Monday, 09:00 - Friday, 13:00

**Authors in Attendance: Thursday, 17:00 - 19:00**

Poster Area: AGORA 3 - ST

Chairperson: N.N.

- ST037 **PEETERS, P.**; MÜLLER, J.-F.; SIMON, P.C.; CELARIER, E.A.; HERMAN, J.R.  
Using satellite measurements from GOME for the estimation of the UV irradiance at the Earth's surface
- ST038 **TOURPALI, K.**; TSELILOUDIS, G.; VASSARAS, A.; BAIS, A.F.; ZEREFOS, C.S.  
Relationships between the attenuation of surface UV irradiance and the radiative properties of the satellite-derived cloud field
- ST039 **RENAUD, A.**; STAEHELIN, J.; PHILIPONA, R.; HEIMO, A.  
Snow and clouds effects on the erythema UV radiation. Analysis of Swiss measurements and modelization
- ST040 **KUZNETSOV, G.I.**; MANOILLO, A.V.  
Volcanic eruptions impact on ultra violet radiation regime
- ST041 **DUBROVSKY, M.**  
The dependence of the solar UV-B radiation on total ozone and solar zenith angle
- ST042 **BRÖNNIMANN, S.**; NEU, U.  
Can increased UV radiation cause surface ozone episodes?
- ST043 **KRÜGER, B.C.**; KIRCHNER, F.; PEREGO, S.  
The influence of radiation on tropospheric chemistry
- ST044 **BEINE, H.J.**; DAHLBACK, A.  
J(NO<sub>2</sub>) at Ny-Ålesund: measurement and model calculation
- ST045 **PHILIPONA, R.**; SHILLING, A.; FROHLICH, C.; HEIMO, A.; RENAUD, A.  
Maximum UV-levels measured on alpine radiation stations
- ST046 **KRZYSCIN, J.W.**; BORKOWSKI, J.  
Long-term changes of the surface UV radiance at Belisk, Poland, 1966-1996
- ST047 **CASALE, G.R.**; DEBUS, S.; MELONI, D.; SIANI, A.M.; PALMIERI, S.  
UV-B radiation and ozone behaviour at Rome station in the recent six years
- ST048 **ZEREFOS, C.S.**  
Preliminary results from PAUR 1
- ST048A **RAJEWSKA-WIECH, B.**; KRZYSCIN, J.W.; DEGORSKA, M.  
Impact of ozone profile on the surface UV radiation: analyses of the Umkehr and UV data taken at Belisk, Poland, 1976-1997

**ST15 Atmospheric ozone (co-sponsored by OA)**  
**.4 Tropospheric ozone with emphasis on the Mediterranean region - Post-er Session**

Convener: Varotsos, C.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

Chairperson: Beekmann, M.

Editors: Varotsos, C.; Kondratyev, K.Ya.

- ST049 **MÖLLER, D.**; KALASS, D.; ACKER, K.;  
 ST15.4-016 WIEPRECHT, W.  
 Five-year record of ozone at Mt. Brocken (Germany) - implications for changing heterogeneous chemistry
- ST050 **GIMENO, L.**; RUA, A.; MARTIN, I.;  
 ST15.4-017 GARCIA, R.; HERNANDEZ, E.  
 Diurnal variations of the surface ozone in Spain
- ST051 **GIMENO, L.**; RUA, A.; MARTIN, I.;  
 ST15.4-018 GARCIA, R.; HERNANDEZ, E.  
 Monthly variation of the surface ozone in Spain
- ST052 **GIMENO, L.**; RUA, A.; MARTIN, I.;  
 ST15.4-019 GARCIA, R.; HERNANDEZ, E.  
 Geographical sources of surface ozone in Spain
- ST053 **GIMENO, L.**; RUA, A.; MARTIN, I.;  
 ST15.4-020 GARCIA, R.; HERNANDEZ, E.  
 On the origin of the elevated surface ozone concentration in Spain
- ST054 **BRÖNNIMANN, S.**  
 ST15.4-021 Early spring ozone episodes: occurrence and case study
- ST055 **VAROTSOS, C.**; CHRONOPOULOS, G.  
 ST15.4-022 Vertical ozone distribution in the troposphere at Athens, Greece
- ST056 **CHRONOPOULOS, G.**; ALEXANDRIS, D.;  
 ST15.4-023 VAROTSOS, C.  
 A statistical model for the relationship of ozone and its precursors at Athens basin
- ST057 **COEUR, C.**; JACOB, V.; FOSTER, P.  
 ST15.4-024 Gas phase reaction of hydroxyl radical with the natural hydrocarbon bornyl acetate
- ST058 **VAROTSOS, C.**; IATROU, T.  
 ST15.4-025 Surface ozone measurements over Athens based on the historical data for the period 1901-1940
- ST059 **VAROTSOS, C.**; ALEXANDRIS, D.  
 ST15.4-026 The role of water vapour on the tropospheric ozone depletion
- ST060 **VAROTSOS, C.**  
 ST15.4-027 On the role of sea salt particles in polluted marine areas
- ST061 **CATSAMBAS, A.**; FERETIS, E.;  
 ST15.4-028 SAKELARIOU, N.; KONDRATYEV, K.YA.; ANTONIOU, C.  
 Tropospheric ozone related changes in biologically active ultraviolet radiation
- ST062 **CATSAMBAS, A.**; FERETIS, E.;  
 ST15.4-029 SAKELARIOU, N.; KONDRATYEV, K.YA.; ANTONIOU, C.  
 On the role of air pollution on the solar radiation reaching the ground
- ST063 **SHAROBIEM, W.M.**; ZAKY, A.S.  
 ST15.4-030 Tropospheric ozone and super dioxide in Cairo atmosphere

- ST064 **KOLOUTSOU-VAKAKIS, S.**; CARRICO, C.M.;  
 ST15.4-031 LI, Z.; ROOD, M.J.; OGREN, J.  
 Characterization of aerosol properties and direct radiative forcing at an anthropogenically perturbed continental site
- ST065 **KONDRATYEV, K.YA.**; MELNIKOVA, I.;  
 ST15.4-032 VAROTSOS, C.; BORISENKOV, E.; GUSCHIN, G.; VOEYKOV, A.I.  
 Surface ultraviolet radiation and ozone content as indicators of environmental quality
- ST066 **VAROTSOS, C.**; KONDRATYEV, K.YA.;  
 ST15.4-033 MELNIKOVA, I.N.; GUSCHIN, G.P.  
 Cloud impact on surface ultraviolet radiation
- ST066A **JAROSLAWSKI, J.**; PRZYBYLSKA, G.  
 ST15.4-034 Surface ozone concentrations at rural locations in Poland in 1996

**ST15 Atmospheric ozone (co-sponsored by OA)**  
**.4 Tropospheric ozone with emphasis on the Mediterranean region**

Convener: Varotsos, C.

Friday, 24 April 1998

Lecture Room: M7

Chairperson: Varotsos, C.

Editors: Varotsos, C.; Kondratyev, K.Ya.

- 08:45 **ANCELLET, G.**; BEEKMANN, G.  
 ST15.4-001 Short and long term variability of the vertical ozone profile in the Mediterranean region
- 09:00 **VAROTSOS, C.**; ALEXANDRIS, D.;  
 ST15.4-002 CHRONOPOULOS, G.  
 On the role of the lower-stratospheric circulation to the vertical ozone structure
- 09:15 **ALEXANDRIS, D.**  
 ST15.4-003 Free tropospheric ozone variations at Athens, Greece
- 09:30 **MÜNZENBERG-ST. DENIS, A.**; RENNER, E.;  
 ST15.4-004 WOLKE, R.  
 Numerical investigation of the influence of biogenic emissions on ozone in Saxony (Germany)
- 09:45 **CHRONOPOULOS, G.**; VAROTSOS, C.  
 ST15.4-005 On the seasonal variation of photo-oxidants at the greater Athens area
- 10:00 **SANZ, M.J.**; CARRATALA, A.; MANTILLA, E.;  
 ST15.4-006 MILLAN, M.  
 Daily ozone patterns and AOT40 index in east coast of the Iberian peninsula
- 10:15 **BASTRUP-BIRK, A.**; BRANDT, J.; ZLATEV, Z.  
 ST15.4-007 Studying periods of high ozone concentrations in the Mediterranean region during a 7-year period
- 10:30 BREAK

Chairperson: Ancellet, G.M.

Editors: Varotsos, C.; Kondratyev, K.Ya.

- 11:00 **SANZ, M.J.**; CALTAYUD, A.; CALVO, E.  
 ST15.4-008 Ozone injury spatial pattern in Aleppo pine and air pollution dynamics in the Mediterranean
- 11:15 **IATROU, T.**  
 ST15.4-009 On the ozone content of the free troposphere over Athens, Greece, as derived by using in situ techniques
- 11:30 **EFSTATHIOU, M.**  
 ST15.4-010 On the statistical analysis of tropospheric and stratospheric ozone content over Athens, Greece

ST

- 11:45 ALEXANDRIS, D.  
ST15.4- Tropospheric ozone contribution to surface warming  
011 at Athens, Greece  
12:00 RAPPENGLÜCK, B.; OYOLA, P.; OLAETA, I.;  
ST15.4- FABIAN, P.  
012 Photochemical smog in Santiago de Chile - relationships between precursors NO<sub>x</sub>, CO, NMHC and secondary compounds ozone and PAN  
12:15 VARINOU, M.; KALLOS, G.; SISTLA, G.  
ST15.4- The role of anthropogenic and biogenic emissions on  
013 tropospheric ozone formation over Greece  
12:30 KREUZWIESER, J.; RENNENBERG, H.  
ST15.4- Production and emission of acetaldehyde in trees  
014  
12:45 VAROTSOS, C.; ALEXANDRIS, D.;  
ST15.4- CHRONOPOULOS, G.  
015 Solar effective UV irradiance at height levels from the surface to the tropopause  
13:00 END OF SESSION

### ST15 Atmospheric ozone (co-sponsored by OA) .5 Ozone as a climate gas

Convener: Shine, K.P.  
Co-Convener(s): Hauglustaine, D.A.  
Friday, 24 April 1998  
Lecture Room: M7  
Chairperson: Shine, K.P.

- 14:00 ROELOFS, G.J.; LELIEVELD, J.  
Changing distribution of tropospheric O<sub>3</sub> and its radiative forcing of climate: past, present, and future (Solicited Paper)  
14:30 STEVENSON, D.S.; JOHNSON, C.E.; COLLINS, W.J.; DERWENT, R.G.; EDWARDS, J.M.; SHINE, K.P.  
The time evolution of tropospheric ozone radiative forcing  
14:45 HAUGLUSTAINE, D.A.; BRASSEUR, G.P.  
Impact of anthropogenic activities on tropospheric ozone  
15:00 PFEILSTICKER, K.; FUNK, O.; KURZ, C.; VEITEL, H.J.; PLATT, U.  
Lévy flights by photons in cloudy skies? Implications for the SW-heating of tropospheric ozone  
15:15 KAROL, I.L.; KISELEV, A.A.  
The tropospheric carbon monoxide distribution in the northern temperate belt as the 2-D model calculation result  
15:30 DEGORSKA, M.; KRZYSCIN, J.W.; RAJEWSKA-WIECH, B.  
Longitudinal differences in seasonal ozone changes over northern midlatitudes  
15:45 BREAK

Chairperson: Hauglustaine, D.A.

- 16:00 PAWSON, S.; LABITZKE, K.; LEDER, S.  
Lower stratospheric temperatures and their relationship with ozone trends (Solicited Paper)  
16:30 KYRÖ, E.; KIVI, R.; TURUNEN, T.  
Trends in tropospheric and lower stratospheric ozone in European Arctic  
16:45 TOURPALI, K.; ZEREFOS, C.S.; BOJKOV, B.R.; KOEHLER, U.; DE MUER, D.  
Ozone and temperature variability over the north European and Canadian regions

- 17:00 CHRISTIANSEN, B.  
Ozone: radiative forcing and climate sensitivity  
17:15 PONATER, M.; SAUSEN, R.; FENEBERG, B.; ROECKNER, E.  
Present-day and future impact of aircraft induced ozone changes  
17:30 ROSIER, S.M.; FORSTER, P.M. DE F.  
Experiments employing ozone changes in a general circulation model  
17:45 FORTUIN, P.; SIEGMUND, P.; ROECKNER, E.  
The effect of a more realistic ozone distribution on climate simulation with a GCM  
18:00 SHINDELL, D.T.  
Future trends in upper stratospheric ozone: progression from halogen to climate control \*  
18:15 END OF SESSION

### ST16 Stratosphere-troposphere-exchange (co-sponsored by OA) I

Convener: Wirth, V.  
Co-Convener(s): Haynes, P.H.  
Wednesday, 22 April 1998  
Lecture Room: M6  
Chairperson: Haynes, P.H.

#### 1. Large-scale transport/exchange/processes

##### a) General circulation questions

- 08:45 PLUMB, R.A.  
Dynamics and transport in the lower stratosphere (Solicited Paper)  
09:15 SIEGMUND, P.; VAN VELTHOVEN, P.; KELDER, H.  
The residual mean meridional circulation in the lower stratosphere, diagnosed from 15 years of ECMWF-reanalysis data  
09:30 JUCKES, M.N.  
The meridional circulation in the lowermost stratosphere  
09:45 CRAIG, G.C.; THUBURN, J.  
The radiative constraint on tropopause height

#### 2. Chemical distributions in the lowermost stratosphere/tropopause region

##### a) Lowermost stratosphere

- 10:00 BORRMANN, S.  
Heterogeneous chemistry in the tropopause region (Solicited Paper)  
10:30 BREGMAN, A.; LELIEVELD, J.  
Mixing of tropospheric air into the mid-latitude stratosphere and its role in atmospheric chemistry  
10:45 EICKE, N.; BUJOK, O.; FISCHER, H.; MCKENNA, D.S.; SCHILLER, C.; SCHLAGER, H.; ZÖGER, M.  
The dry lowermost stratosphere in the arctic winter: evidence for local dehydration  
11:00 ZAHN, A.; PLATT, U.  
Airborne CO<sub>2</sub>, CH<sub>4</sub>, O<sub>3</sub> and SF<sub>6</sub> measurements to study tracer transport around the tropopause  
11:15 BÜHLER, S.A.; KÜNZI, K.  
Microwave limb-sounding of water vapour in the tropopause region  
11:30 BUJOK, O.; EICKE, N.; ENGEL, A.; LELIEVELD, J.; MCKENNA, D.S.; SCHILLER, C.; ZÖGER, M.  
Experimental evidence for the existence of a very lowermost stratosphere

11:45 HESS, P.  
Analysis of the seasonal transport of ozone and water vapor into the lower stratosphere

12:00 LUNCH

12:00 Business Meetings

Chairperson: Borrmann, S.

#### b) Tropics/subtropics

14:00 WEINSTOCK, E.M.; HINTSA, E.J.; ANDERSON, J.G.; BOERING, K.A.; DAUBER, B.C.; WOFSY, S.C.; HERMAN, R.L.; MAY, R.D.; WEBSTER, C.R.

Evaluation of the seasonal cycle of water vapor in the stratosphere derived from monthly average tropical tropopause temperatures using a CO photochemical clock (Solicited Paper)

14:30 SUHRE, K.; CAMMAS, J.-P.; NEDELEC, P.; ROSSET, R.; MARENCO, A.; SMIT, H.G.J.

Ozone-rich transients in the upper equatorial Atlantic troposphere

14:45 DETHOF, A.; O'NEILL, A.; SLINGO, J.

Water vapour transport associated with the Asian summer monsoon

15:00 CAMMAS, J.-P.; JACOBY-KOALY, S.; SUHRE, K.; ROSSET, R.; MARENCO, A.

Stratosphere-troposphere exchange across the potential vorticity barrier of the subtropical jet as seen with MOZAIC-ozone measurement

Chairperson: Wirth, V.

### 3. Synoptic- and small-scale exchange/processes

#### a) Folds, laminae, relevant processes

15:15 MCKENNA, D.; LERNER, A.

Observations of trace gases in the vicinity of a tropopause fold

15:30 MANCIER, C.; BEEKMANN, M.; ANCELLET, G.; MARENCO, A.

Spatial and temporal variability of tropopause folds occurrence - implications for the cross tropospheric ozone flux

15:45 CAMMAS, J.-P.; RAVETTA, F.; ANCELLET, G.

Life cycle of a tropopause fold

16:00 WORTHINGTON, R.M.; VAUGHAN, G.  
Case study of stratosphere troposphere exchange using VHF wind profiler, ozonesonde, radiosonde and E.C.M.W.F. data

16:15 FORSTER, C.; WIRTH, V.

Radiative decay of stratospheric laminae in the troposphere

#### b) VOTALP

16:30 FELDMANN, H.; MEMMESHEIMER, M.; STOHL, A.; TRICKL, T.; BONASONI, P.; GAEGGELER, H.; GRABER, W.; KROMP-KOLB, H.

VOTALP: observation and simulation of a stratospheric intrusion event over the Alps

16:45 ZANIS, P.; SCHUEPBACH, E.; GGGELER, H.W.; HBENER, S.; STOHL, A.

A summer stratospheric intrusion event at Jungfrauoch (3,580 m ASL) in Switzerland

17:00 END OF PART I

## **ST16 Stratosphere-troposphere-exchange (co-sponsored by OA) II**

Convener: Wirth, V.

Co-Convener(s): Haynes, P.H.

Thursday, 23 April 1998

Lecture Room: M6

Chairperson: Craig, G.C.

#### c) Various other case studies etc.

08:30 KOWOL-SANTEN, J.; RAVETTA, F.; EBEL, A.

Analysis of transport and exchange processes in the tropopause region by means of Lagrangian methods

08:45 GOUGET, H.; VAUGHAN, G.

Case study of a cut-off low during TOASTE-C campaign

09:00 RAVETTA, F.; ANCELLET, G.; KOWOL-SANTEN, J.

Stratosphere-troposphere exchange within a cut-off low: airborne measurement campaign and mesoscale modelling

09:15 WIRTH, V.; EGGER, J.

Diagnosing extratropical stratosphere-troposphere exchange: a case study

09:30 TAFFERNER, A.

Stratosphere-troposphere exchange in a stratospheric intrusion

09:45 HEREIL, P.; VAN BAELEN, J.

Nonhydrostatic numerical simulations and wind profilers observations of a cut-off low episode near the Alps

10:00 PERSSON, K.; NILSSON, H.; KIRKWOOD, S.; CHILSON, P.

Study of stratosphere troposphere exchange at high latitudes with MST radar and ozonesondes

10:15 BREAK

Chairperson: Hess, P.

10:45 SCHULZ-SCHÖLLHAMMER, K.;

MARQUARDT, C.; SINGER, W.; HOFFMANN, P.  
A case study to identify layers with laminar or turbulent flows using ST radar and radiosonde observations and trajectory calculations

11:00 SINGER, W.; HOFFMANN, P.; KEUER, D.; CZECHOWSKY, P.

Observations of the tropopause region above Andenes during the break up of the polar vortex in March 1995 with the ALOMAR SOUSY radar

#### 1.b) GCMs

11:15 BOURQUI, M.; WERNLI, H.; BRUNNER, D.

A climatology of stratosphere-troposphere ozone exchange for the Atlantic-European sector

11:30 MANZINI, E.; FEICHTER, J.

Transport in the middle atmosphere (MA) ECHAM general circulation model

11:45 LAND, C.; FEICHTER, J.; SAUSEN, R.

Transport simulations of natural tracers with the ECHAM GCM: sensitivity of stratosphere-troposphere exchange to the vertical resolution

12:00 TIMMRECK, C.

Stratospheric-tropospheric-exchange: a Pinatubo case study

ST

- 12:15 **JACKSON, D.R.**; PAMMENT, J.A.; METHVEN, J.; POPE, V.D.  
Transport in the low latitude tropopause region as simulated by the UK Meteorological Office Unified Model
- 12:30 **PLANTEVIN, P.H.**; SHALLCROSS, D.E.; LAW, K.S.; PYLE, J.A.  
Chemical impact on the troposphere of tropopause fold events during TOASTE campaigns
- 12:45 **KENTARCHOS, A.**; ROELOFS, G.J.; LELIEVELD, J.  
Simulation of a stratospheric intrusion event at subtropical latitudes using a coupled chemistry-general circulation model
- 13:00 **LUNCH**  
Joint Session ST16/NP3.5 to continue in Lecture Room M3 at 14.00

Lecture Room: M3  
Chairperson: Waugh, D.W.

4. Joint session ST16/NP3.5  
a) Techniques such as RDF

- 14:00 **MCKENNA, D.**; BUJOK, O.; THOMAS, N.  
Comparison of RDF with in-situ data (Solicited Paper)
- 14:30 **AMBAUM, M.**; BUJOK, O.  
Correction for phase errors in lagrangian modelling of tracer filaments
- 14:45 **BITHELL, M.**; GRAY, L.J.  
Isentropic and three dimensional trajectories near the tropopause
- 15:00 **METHVEN, J.**; HOSKINS, B.  
On the advection of high resolution tracers by low resolution winds
- 15:15 **MARIOTTI, A.**; LEGRAS, B.; MECHOSO, C.R.  
Pseudo-contour advection with surgery

b) Studies using observed/model winds

- 15:30 **SHUCKBURGH, E.**  
Investigating transport across the tropopause
- 15:45 **BAGLIANI, M.**; FRAEDRICH, K.; VON HARDENBERG, J.; LUNKEIT, F.  
Lagrangian climatology of a simplified general circulation model
- 16:00 **LAPEYRE, G.**; LEGRAS, B.  
A criterion for the formation of filaments around the polar vortex
- 16:15 **BRUNET, G.**; GRAVEL, S.; ROCH, M.; GAUTHIER, P.; PELLERIN, S.; EK, N.; EDOUARD, S.  
High resolution forecasts of polar stratospheric ozone using the Canadian Global Environmental Multiscale Model
- 16:30 **END OF PART II**

**Attend the Poster Session**

and the

**Exhibition**

**ST16 Stratosphere-troposphere-exchange (co-sponsored by OA) III**

Convener: Wirth, V.  
Co-Convener(s): Haynes, P.H.  
**Friday, 24 April 1998**  
Lecture Room: M3  
Chairperson: McKenna, D.

Joint ST16/NP3.5 session continued

c) Lower stratospheric tracer studies

- 08:30 **WAUGH, D.W.**  
Seasonal variation of stirring and mixing in the lower stratosphere (Solicited Paper)
- 09:00 **ALFIER, R.**; PAWSON, S.; KETELSEN, K.  
Fine structure of water vapour transport at the polar vortex
- 09:15 **LEDER, S.**; BECK, A.  
The relationship between the exchange across the subtropical barrier and planetary wave activity in a global model
- 09:30 **GODIN, S.**; BERGERET, V.; BEKKI, S.; DAVID, C.; HAUCHECORNE, A.  
Lidar aerosol measurements showing the stratified structure of the Antarctic polar vortex in the spring of 1992
- 09:45 **HAUCHECORNE, A.**; GODIN, S.; SOUPRAYEN, C.  
Meridional transport of ozone in the lower stratosphere at middle latitudes: lidar observations and simulation with a high resolution advection model
- 10:00 **ROZANOV, E.**; ZUBOV, V.; SCHLESINGER, M.; YANG, F.; ANDRONOVA, N.  
Simulation of trace-gas distributions with the UIUC 3-D atmospheric chemical-transport model and comparison of source gas distributions with observations
- 10:15 **CAHILL, M.**; PLANTEVIN, P.H.; LAW, K.S.; SHALLCROSS, D.E.; CHIPPERFIELD, M.; EVANS, M.; PYLE, J.A.; GERBIG, C.; RICHER, H.; BAUGUITTE, S.; BANDY, B.; MILLS, G.; PENKETT, S.  
A comparison of flight measurements from summer '97 with TOMCAT
- 10:30 **BREAK**  
End of Session ST16/Session NP3.5 to continue

**ST17 Aviation and space flight (co-sponsored by OA)**  
**.1 Aviation impact on the atmosphere**

Convener: Kelder, H.  
Co-Convener(s): Sausen, R.  
**Monday, 20 April 1998**  
Lecture Room: M8  
Chairperson: Kelder, H.

- 08:30 **SCHLAGER, H.**; SCHUMANN, U.  
The POLINAT-2 experiment: a study of large-scale air traffic effects (Solicited Paper)
- 08:55 **MEIJER, E.W.**; WAUBEN, W.M.F.; VAN VELTHOVEN, P.F.J.; KELDER, H.M.  
The impact of air traffic in the NAFC: model results versus measurements

- 09:10 **DENTENER, F.J.**; ABILOVA, E.; BERNSTEN, T.; GREWE, V.; ISAKSEN, I.; MUELLER, J.F.; STEVENSON, D.; WANG, Y.; VAN WEELE, M.  
The IPCC special report on aviation and the global atmosphere: the impact of future subsonic aircraft emissions
- 09:25 **GREWE, V.**; DAMERIS, M.; KÖHLER, I.; PONATER, M.; SAUSEN, R.  
The impact of NO<sub>x</sub> aircraft emissions on atmospheric composition and climate
- 09:40 **SIMON, P.**; DESSENS, O.  
Simulation of the aircraft effects upon the atmospheric chemistry
- 09:55 **STEVENSON, D.S.**; JOHNSON, C.E.; COLLINS, W.J.; DERWENT, R.G.  
Aircraft NO<sub>x</sub> impacts on tropospheric ozone
- 10:10 **GROSE, W.L.**; ECKMAN, R.S.  
Global impact of a future High-Speed Civil Transport (HSCT) aircraft fleet on the atmospheric ozone column: a three-dimensional model simulation
- 10:25 **BREAK**

Chairperson: Sausen, R.

- 10:40 **HOFMANN, D.J.**; WOOD, M.; STONE, R.; DESHLER, T.  
Analysis of 24 years of balloon-borne aerosol data to determine the effects of subsonic aircraft (Solicited Paper)
- 11:05 **PETRY, H.**; HENDRICKS, J.; LIPPERT, E.; MEIER, A.; EBEL, A.; SAUSEN, R.  
Chemical conversion of aircraft emissions in the dispersing plume: calculation of effective emissions indices
- 11:20 **MÜLLER, J.-F.**  
Upper tropospheric HO<sub>x</sub>: sources and role in the aircraft impact issue
- 11:35 **HENDRICKS, J.**; LIPPERT, E.; PETRY, H.; EBEL, A.  
Impact of subsonic aircraft on atmospheric chemistry: mesoscale simulations on the role of heterogeneous reactions on/in sulfate aerosols
- 11:50 **PRASAD, S.S.**; ZIPF, E.C.  
Emerging new atmospheric chemistry of nitric oxide and its implications for the aviation impact on the atmosphere
- 12:05 **SCHRÖDER, F.**; KÄRCHER, B.; PETZOLD, A.  
In situ observations of aerosol particles in jet aircraft plumes
- 12:20 **SLEMR, F.**; GIEHL, H.; SLEMR, J.; BUSEN, R.; SCHULTE, P.; HASCHBERGER, P.  
In-flight measurements of aircraft non-methane hydrocarbon emission indices
- 12:35 **BOUCHER, O.**  
Is there any observable increase in cirrus cloud due to aviation during 1982-1991?
- 12:50 **WYSER, K.**; STRÖM, J.  
A possible change in cloud radiative forcing due to aircraft exhaust
- 13:05 **PONATER, M.**; GIERENS, K.; SAUSEN, R.; BRINKOP, S.; INCLAN, G.  
Parametrization of contrails in a climate model
- 13:20 **END OF SUB-SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

## **ST17 Aviation and space flight (co-sponsored by OA)**

### **.1 Aviation impact on the atmosphere - Poster Session**

Convener: Kelder, H.

Co-Convener(s): Sausen, R.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - ST

- ST067 **ECKMAN, R.S.**; GROSE, W.L.  
Three-dimensional modelling studies of the impact of aircraft emissions on atmospheric ozone: sensitivity to emission indices H<sub>2</sub>O, and sulfur conversion
- ST068 **GABRIEL, A.**; SCHMITZ, G.  
Climate impact of aircraft emissions in the upper troposphere. Studies with a 2D-model
- ST069 **KAROL, I.L.**; KISELEV, A.A.  
Model study of atmospheric pollution by aviation engines in the northern temperate belt
- ST070 **LINDERMEIR, E.**; HASCHBERGER, P.; TANK, V.  
Remote measurements of aircraft exhaust gas using FTIR spectrometry at industrial test-rigs
- ST072 **ROZANOV, E.**; ZUBOV, V.; SCHLESINGER, M.; YANG, F.; ANDRONOVA, N.  
The influence of aircraft emissions on the geographical distributions of ozone and reservoir species in the upper troposphere and stratosphere
- ST073 **SAUSEN, R.**; GIERENS, K.; SCHUMANN, U.  
A diagnostic study of the present and future coverage by contrails
- ST074 **SOROKIN, A.**  
Ice contrail formation in jet of ATTAS aircraft \*
- ST075 **ZIEREIS, H.**; SCHLAGER, H.; SCHULTE, P.; KÖHLER, I.  
In situ measurements of NO<sub>x</sub> in the North Atlantic flight corridor
- ST076 **WUNRAM, C.**; BAKAN, S.  
Environmental conditions for longlived contrails as derived from Mozaic data

## **ST17 Aviation and space flight (co-sponsored by OA)**

### **.2 Air traffic meteorology and weather impact on aviation I**

Convener: Hauf, T.

Co-Convener(s): André, J.-C.; Carriere, J.-M.; Corjon, A.

Monday, 20 April 1998

Lecture Room: M8

Chairperson: Carriere, J.-M.

- 14:00 **HAUF, T.**; SCHRÖDER, F.  
Observations of aircraft and supercooled large drops
- 14:15 **TAFFERNER, A.**; HAUF, T.; HAFNER, T.  
Diagnosis of icing and nowcasting for aviation (Poster)
- 14:20 **IMPERATO, I.**; LEONE, G.  
In-flight icing cloud measurements by an airborne droplet analyser (Poster)
- 14:25 **JENTINK, H.W.**  
Supercooled large droplets in icing conditions

ST



- 14:40 **PIGEONNEAU, F.; GUFFOND, D.;**  
**FEUILLEBOIS, F.**  
 Theoretical study of the drizzle formation by co-alescence
- 14:55 **SANCHEZ, J.L.; VEGA, A.; MARCOS, J.L.;**  
**FRAILE, R.**  
 Giant supercooled drops in Cb
- 15:10 **EVANS, J.**  
 Impact of adverse weather on major US airports (Solicited Paper)
- 15:40 **EVANS, J.**  
 Reducing the impact of adverse terminal weather on major US airports with the Integrated Terminal Weather System (ITWS) (Poster)
- 15:45 **PEKELA, W.D.**  
 Influence of wind prediction on the capacity of a time-based ATM system
- 16:00 **BENJAMIN, S.G.; SCHWARTZ, B.E.; JARDIN, M.;**  
**GREEN, S.**  
 Wind and aircraft trajectory errors in the Denver terminal airspace from versions of the RUC
- 16:15 **GIMENO, L.; RUA, A.; VIDAL, O.; FERNANDEZ, D.**  
 Weather impact on the air traffic in the three airports of Galicia (Spain) (Poster)
- 16:20 **UTNES, T.; EIDSVIK, K.J.**  
 Computation of wind effects in the wake of buildings close to a runway (Poster)
- 16:25 **PATTON, R.; LUNNON, R.W.**  
 Investigation into lightning strikes to helicopters operating over the North Sea (Poster)
- 16:30 **TURNER, J.**  
 An automated scheme for predicting mountain wave induced turbulence for civil aviation (Poster)
- 16:35 **END OF PART I**
- 17:00 Opening
- 19:30 Reception

**ST17 Aviation and space flight (co-sponsored by OA)**  
**.2 Air traffic meteorology and weather impact on aviation II**

Convener: Hauf, T.  
 Co-Convener(s): André, J.-C.; Carriere, J.-M.; Corjon, A.  
**Tuesday, 21 April 1998**  
 Lecture Room: M8  
 Chairperson: Hauf, T.

- 08:30 **SHERRETZ, L.A.; RODGERS, D.; WILSON, A.**  
 Developing grid interaction and product generation tools for NWS aviation forecasters
- 08:45 **MAHONEY, J.; HENDERSON, J.**  
 Developing the real time verification system to support aviation forecasting and product development
- 09:00 **MARROQUIN, A.; GIRZ, C.M.I.R.; MAHONEY, J.L.**  
 Forecasting turbulence in the upper troposphere
- 09:15 **PRATT, G.**  
 Enhancing the aviation digital data service
- 09:30 **VERRET, R.; TURCOTTE, M.-F.; SOUVANLASY, V.;**  
**BALTAZAR, M.**  
 An interactive Aviation Weather Database (AWeD) (Poster)

- 09:35 **WIENS, B.**  
 Investigation of a graphical area forecast in Canada (Poster)
- 09:40 **ENGFER, D.**  
 AMETIS1 system for windshear and inversion warnings at the Zürich airport (Poster)
- 09:45 **HUYNH, H.T.; DESCATOIRE, F.; HAHN, K.U.;**  
**KÖNIG, R.; HAVERDINGS, H.; ROUWHORST, W.F.J.A.**  
 Simulation investigations into airborne reactive and forward looking windshear detection systems
- 10:00 **LAROCHE, P.; BLANCHET, P.; DEFER, E.;**  
**THERY, C.**  
 Comparison of ASR weather channel echo and 3D lightning observations in Florida storms
- 10:15 **MONNIER, B.; BARBARESCO, F.**  
 Storm forecasting with radar image processing based on model-constrained and geodesic active contours
- 10:30 **BREAK**

Chairperson: André, J.-C.

- 11:00 **RICHARD, P.**  
 New meteorological data fusion concepts for storm nowcasting applied to ATC
- 11:15 **SANCHEZ, J.L.; VEGA, A.; AJO, J.; SERRANO, O.**  
 Procedure for scientific flights in Cb (Poster)
- 11:20 **PATTON, R.; HALSEY, N.; LUNNON, R.W.**  
 User sensitivity to ceiling and visibility and its influence on terminal forecast verification
- 11:35 **MONNIER, B.; BARBARESCO, F.**  
 Inquiry into the ground ATC/ATM requirements for meteorological data (Poster)
- 11:40 **GREENE, G.C.**  
 Effects of weather on aircraft wake turbulence experienced during cruise flight
- 11:55 **CAISSO, P.; VALENTIN, J.C.; CORJON, A.**  
 SY.A.G.E. - The French wake vortex spacing system
- 12:10 **YARAS, M.I.**  
 Effects of atmospheric conditions and ground proximity on the dynamics of aircraft wake vortices: a study of the 1994-95 Memphis field measurements
- 12:25 **HALLOCK, J.; BURNHAM, D.; SIGONA, J.**  
 Analysis of stalled vortices at DFW airport
- 12:40 **BURNHAM, D.; RUDIS, R.**  
 Expected performance of crosswind based wake vortex avoidance systems at DFW airport
- 12:55 **LUNCH**

Chairperson: Corjon, A.

- 14:00 **PROCTOR, F.H.**  
 NASA Langley's numerical modelling effort to understand the interaction of aircraft wake vortices with their environment (Solicited Paper)
- 14:30 **HOLZÄPFEL, F.; GERZ, T.**  
 Aircraft wake vortex characteristics in the stably stratified atmosphere
- 14:45 **DARRACQ, D.; CORJON, A.**  
 Computational investigation of aircraft trailing-vortex evolution in atmospheric boundary layers
- 15:00 **DELISI, D.P.; GREENE, G.C.; ROBINS, R.E.**  
 Comparison of laboratory wake vortices with aircraft vortices
- 15:15 **GOODEN, J.H.M.; WILLEMSSEN, E.;**  
**MARSMAN, A.**  
 Vortex wake measurement test run facility Schiphol

- 15:30 GILLOT, B.; MARAIS, C.  
Participation of Météo-France in wake vortices studies
- 15:45 KEANE, M.; BUCKTON, D.; DARRACQ, D.  
Wake vortex hazard detection Doppler lidar
- 16:00 KÖPP, F.  
More insight into aircraft wake vortices by means of ground-based CW Doppler lidar
- 16:15 UHLMAN, J.; GRANT, J.; FINE, N.; REES, F.  
On the sound generated by aircraft trailing vortices: a description of the project SOCRATES theory and modelling effort
- 16:30 TURNER, J.  
ETWIRL: a new pan-European wake vortex reporting system and database
- 16:45 SPITZER, E.; REES, F.; VONWINKLE, W.; WILLIAMS, R.  
An overview of project SOCRATES (Poster)
- 16:50 NADEAU, M.  
A success story between NAV CANADA and Environment Canada (Poster)
- Stand-by paper:  
LEONARD, K.; FELLNER, W.; PACE, D.  
Activities of the Federal Aviation Administration's Aviation Weather Research program\*
- 16:55 END OF SESSION
- ST17 Aviation and space flight (co-sponsored by OA)**  
**.2 Air traffic meteorology and weather impact on aviation - Poster Session**
- Convener: Hauf, T.  
Co-Convener(s): André, J.-C.; Carriere, J.-M.; Corjon, A.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Tuesday, 17:30 - 19:00  
Poster Area: AGORA 3 - ST
- ST077 TAFFERNER, A.; HAUF, T.; HAFNER, T.  
Diagnosis of icing and nowcasting for aviation
- ST078 IMPERATO, I.; LEONE, G.  
In-flight icing cloud measurements by an air-borne droplet analyser
- ST079 EVANS, J.  
Reducing the impact of adverse terminal weather on major US airports with the Integrated Terminal Weather System (ITWS)
- ST080 GIMENO, L.; RUA, A.; VIDAL, O.; FERNANDEZ, D.  
Weather impact on the air traffic in the three airports of Galicia (Spain)
- ST081 UTNES, T.; EIDSVIK, K.J.  
Computation of wind effects in the wake of buildings close to a runway
- ST082 PATTON, R.; LUNNON, R.W.  
Investigation into lightning strikes to helicopters operating over the North Sea
- ST083 TURNER, J.  
An automated scheme for predicting mountain wave induced turbulence for civil aviation
- ST084 VERRET, R.; TURCOTTE, M.-F.; SOUVANLASY, V.; BALTAZAR, M.  
An interactive Aviation Weather Database (AWeD)
- ST085 WIENS, B.  
Investigation of a graphical area forecast in Canada
- ST086 ENGFER, D.  
AMETIS1 system for windshear and inversion warnings at the Zürich airport
- ST087 SANCHEZ, J.L.; VEGA, A.; AJO, J.; SERRANO, O.  
Procedure for scientific flights in Cb
- ST089 MONNIER, B.; BARBARESCO, F.  
Inquiry into the ground ATC/ATM requirements for meteorological data
- ST090 SPITZER, E.; REES, F.; VONWINKLE, W.; WILLIAMS, R.  
An overview of project SOCRATES
- ST090A NADEAU, M.  
A success story between NAV CANADA and Environment Canada



## 1999 General Assembly Den Haag, 19 - 23 April

Attend the open EGS Section/IWG Meetings on Wednesday, 22 April, 12.00-14.00, and make your suggestions, to the scientific programme. Further information on the EGS Web Site  
<http://www.copernicus.org/EGS/EGS.html>.

# Planetary and Solar System Sciences

## PS1 Planetary interiors I

Convener: Lognonné, P.  
Co-Convener(s): Gudkova, T.V.  
**Wednesday, 22 April 1998**  
Lecture Room: M4  
Chairperson: N.N.

### Mars new results and future missions

- 14:00 ACUNA, M.H.; CONNERNEY, J.E.P.; WASILEWSKI, P.; REME, H.; MAZELLE, C.; SAUVAUD, J.; D'USTON, C.; LIN, R.; ANDERSON, K.; CARLSON, C.; MCFADDEN, J.; CURTIS, D.; MITCHELL, D.; CLOUTIER, P.; MAYHEW, M.; NESS, N.F.; BAUER, S.J.  
The magnetic field of Mars: initial results from the Mars global surveyor magnetic fields investigation (Solicited Paper)
- 14:30 YODER, C.F.; FOLKNER, W.M.; YUAN, D.N.; STANDISH, E.M.; STANDISH, R.A.  
Mars moment of inertia from Pathfinder and Viking radio tracking data (Solicited Paper)
- 15:00 LEWELING, M.; SPOHN, T.  
Models of a Martian remanent magnetic field
- 15:15 FORNI, O.; BREUER, D.; SPOHN, T.  
Mars' thermal evolution with phase transitions
- 15:30 BREUER, D.; SPOHN, T.; YUEN, D.  
Evolution of the magnetic field of Mars
- 15:45 MOCQUET, A.  
How many seismological stations are needed to ensure body wave detections on Mars?
- 16:00 ZHARKOV, V.N.; BABEIKO, A.YU.  
Mineral composition and seismic model of the Martian crust
- 16:15 END OF PART I

## PS1 Planetary interiors - Poster Session

Convener: Lognonné, P.  
Co-Convener(s): Gudkova, T.V.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: AGORA 3 - PS

- PS001 KOICHEMASOV, G.  
Tectonic dichotomy of all cosmic bodies
- PS002 DE MORAIS, A.  
A possible internal structure of Europa

---

### Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00 in Lecture Room M4

---

## PS1 Planetary interiors II

Convener: Lognonné, P.  
Co-Convener(s): Gudkova, T.V.  
**Thursday, 23 April 1998**  
Lecture Room: M4  
Chairperson: N.N.

### Other terrestrial bodies

- 09:00 CHAMBAT, F.; VALETTE, B.  
Lunar structure and Clementine data: test of a tectonic inversion scheme (Solicited Paper)
- 09:30 CONZELMANN, V.; SPOHN, T.  
Consequences of different viscosity laws on models of planetary mantle convection
- 09:45 VAN DEN BERG, A.; YUEN, D.A.  
The role played by pressure-dependent rheology in controlling planetary cooling

### Galileo results

- 10:00 KIVELSON, M.G.; KHURANA, K.K.  
Magnetic signatures of the Galilean moons of Jupiter and their implications for interior structure (Solicited Paper)
- 10:30 BREAK
- Chairperson: N.N.
- 11:00 KHURANA, K.K.; KIVELSON, M.G.  
Does Io possess an internal magnetic field? (Solicited Paper)
- 11:30 SPOHN, T.; STEINBACH, V.  
Io: a model to account for the discrepancy between heat flow and tidal dissipation rate
- 11:45 GUILLOT, T.; GAUTIER, D.; HUBBARD, W.B.  
New constraints on the composition of Jupiter from Galileo measurements and interior models
- 12:00 GUDKOVA, T.V.; ZHARKOV, V.N.  
Theoretical spectrum of new Jovian models
- 12:15 Concluding Remarks
- 12:30 END OF SESSION

## PS2 Evolution and state of surfaces, crusts and lithospheres of planetary bodies I

Convener: Janle, P.  
Co-Convener(s): Basilevsky, A.T.  
**Monday, 20 April 1998**  
Lecture Room: M1  
Chairperson: N.N.

- 11:00 IVANOV, B.A.  
Complex impact crater formation: large terrestrial craters
- 11:15 BRUNS, P.; DULLO, W.-C.  
Geochemistry of marine sediments and their significance for studies of cosmic fluxes and effects of extraterrestrial impacts
- 11:30 WARELL, J.; LAGERKVIST, C.-I.; LIMAYE, S.S.; SCHARMER, G.; GUNNARSSON, M.; LAGERROS, J.S.V.; MUINONEN, K.  
High-resolution groundbased imaging of Mercury at visual and near-infrared wavelengths

- 11:45 ORI, G.G.; BALIVA, A.; MARINANGELI, L.; SALVIO, L.  
Sedimentary environment and climatic changes on Mars
- 12:00 GALIMOV, E.M.  
On problem of enrichment in  $^{13}\text{C}$  of the Martian carbon
- 12:15 JÖNS, H.-P.  
No escers in the vicinity of the south pole cap on Mars, but solidified fossil "tsunamis"
- 12:30 MANGOLD, N.; ALLEMAND, P.; THOMAS, P.  
Datation of compressive deformation on Mars: evidence for global contraction
- 12:45 LUNCH

Chairpersons: Ori, G.G.; Greeley, R.

- 14:00 ZUBER, M.T.; SMITH, D.E.  
Implications for the lithosphere of Mars as a result of accurate topographic data from the MGS laser altimeter
- 14:15 CHICARRO, A.F.  
Objectives of the Mars express mission
- 14:30 TURCOTTE, D.L.; ROBERTS, D.; MALAMUD, B.D.  
The catastrophic evolution of Venus and the cratering record
- 14:45 MARINANGELI, L.; ORI, G.G.  
Some clues on the origin of Audra Planitia basin, Venus
- 15:00 ROSENBLATT, P.; BARRIOT, J.P.; PINET, P.C.; VALES, N.  
Combined regional analysis of gravity data and surface geology at Venusian hot spot periphery
- 15:15 FRANK, S.; BOUNAMA, CH.  
Comparative degassing history of Earth and Venus
- 15:30 MCCORD, T.B.; HANSEN, G.B.; FANALE, F.P.; GRANAHAHAN, J.C.; MARTIN, P.D.; HIBBITTS, C.A.; CARLSON, R.W.; SMYTHE, W.D.; MATSON, D.L.; JOHNSON, T.V.; NIMS TEAM  
Nature of ice and non-ice constituents of the surfaces of the icy Galilean satellites (Solicited Paper)
- 16:00 NEUKUM, G.; WAGNER, R.; WOLF, U.; HEAD III, J.W.; PAPPALARDO, R.; BELTON, M.J.S.; GALILEO SSI TEAM  
Bombardment history and ages of the Galilean satellites (Solicited Paper)
- 16:30 SCHUSTER, P.; OBERST, J.; ZEITLER, W.; NEUKUM, G.; THOMAS, P.; MCEWEN, A.; GALILEO IMAGING TEAM  
Shape and topography of Io - results from the Galileo mission
- 16:45 END OF PART I
- 17:00 Opening
- 19:30 Reception

## Planetary and Space Science

an official journal of the EGS for the publication of your results presented at the 23rd General Assembly

## PS2 Evolution and state of surfaces, crusts and lithospheres of planetary bodies II

Convener: Janle, P.

Co-Convener(s): Basilevsky, A.T.

Tuesday, 21 April 1998

Lecture Room: M1

Chairperson: Rosenblatt, P.

- 08:30 GREELEY, R.; KLEMASZEWSKI, J.; KADEL, S.; SULLIVAN, R.; PAPPARDO, R.; HEAD III, J.; NEUKUM, G.; DENK, T.; GALILEO IMAGING SCIENCE TEAM  
Europa in the prime Galileo mission (Solicited Paper)
- 09:00 GREELEY, R.; FAGENTS, S.; SCHWARZ, W.; KLEMASZEWSKI, J.; SULLIVAN, R.; HEAD, J.; PAPPALARDO, R.; GALILEO SSI TEAM  
Cryovolcanism on Europa: Galileo results in the nominal mission
- 09:15 PAPPALARDO, R.T.; HEAD, J.W.; GREELEY, R.; SULLIVAN, R.J.; PILCHER, C.; SCHUBERT, G.; MOORE, W.; CARR, M.H.; MOORE, J.M.; BELTON, M.J.S.; GALILEO SSI TEAM  
Diapirism and solid-state convection on Europa
- 09:30 GRANAHAHAN, J.C.; FANALE, F.P.; CARLSON, R.; KAMP, L.; MATSON, D.; OCAMPO, A.; SMYTHE, W.; GREELEY, R.; SULLIVAN, R.; GEISSLER, P.; MOORE, J.; BELTON, M.; GALILEO NIMS AND SSI INSTRUMENT TEAMS  
Galileo's visible-infrared observations of the tyre region of Europa
- 09:45 HEAD, J.W.; PAPPALARDO, R.; PROCKTER, L.; COLLINS, G.; NEUKUM, G.; BELTON, M.J.S.; GALILEO IMAGING TEAM  
Synthesis of Galileo imaging results for Ganymede
- 10:00 HEAD, J.W.; PAPPALARDO, R.; KAY, J.; COLLINS, G.; PROCKTER, L.; GALILEO IMAGING TEAM  
Galileo evidence for Ganymede cryovolcanism
- 10:15 KLEMASZEWSKI, J.; WAGNER, R.; GREELEY, R.; NEUKUM, G.; CHAPMAN, C.; MERLINE, W.J.; GALILEO SSI TEAM  
Callisto multi-ring structures and impactor populations from Galileo data
- 10:30 END OF SESSION

## PS2 Evolution and state of surfaces, crusts and lithospheres of planetary bodies - Poster Session

Convener: Janle, P.

Co-Convener(s): Basilevsky, A.T.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - PS

Chairpersons: Basilevsky, A.T.; Janle, P.

- PS003 OROFINO, V.; BLANCO, A.; BLECKA, M.I.; FONTI, S.; JUREWICZ, A.  
Search for carbonates on the surface of Mars by means of the planetary Fourier spectrometer
- PS004 ERARD, S.  
A spectrophotometric model for Mars

PS

- PS005 **MOSANGINI, C.; KOMATSU, G.**  
Geomorphology of Kasei Valles and scale of flooding episodes
- PS006 **MEYERER, TH.**  
Detectability of sulfates in Martian soils considering duri crust properties
- PS007 **MANGOLD, N.; ALLEMAND, P.; THOMAS, P.; DUVAL, P.**  
Rheology of Martian frozen ground: implications for global water storage
- PS008 **HELLER, D.-A.; JANLE, P.**  
Lineament analysis and the estimation of the thickness of the lithosphere in the Alba Patera region, Mars
- PS009 **HARLOFF, J.; ARNOLD, G.**  
Preparation of massive artificial basalt samples as spectroscopic analog materials for planetary surfaces
- PS010 **KRONBERG, P.**  
Faults and fault patterns of continental rifts or rift-like structures on Venus, Mars and Earth-A comparative study
- PS011 **IVANOV, A.B.; MUHLEMAN, D.O.**  
Terrains near north pole of Mars from Mars Orbiter Laser Altimeter observations. Edge of the ice cap
- PS012 **QUINN, R.; ZENT, A.P.**  
Heterogeneous catalysis of hydrogen peroxide vapor by martian soil analogs: implication for regolith penetration depths of photochemically produced oxidants on Mars \*
- PS013 **BOSTROM, R.C.**  
Tectonics of Earth & Venus: existence of waves  $M_2$ ,  $S_2$
- PS014 **ANSAN, V.; PAILLOU, PH.**  
Determination of surface roughness of lava flows on Venus from Magellan radar images
- PS015 **DUPEYRAT, L.; ANSAN, V.; INSERGUEIX, D.**  
Chemical destabilisation of a thickened Venusian lithosphere, up to melting conditions. Application to Maxwell montes
- PS016 **SCHREINER, B.; WAGNER, R.; NEUKUM, G.; GALILEO SSI TEAM**  
Orientation and chronological sequence of lineaments on Europa's wedged terrain
- PS017 **WAGNER, R.; WOLF, U.; NEUKUM, G.; KLEMASZEWSKI, J.; GREELEY, R.; GALILEO SSI TEAM**  
Morphology, geology, distribution and ages of dome craters on Ganymede and Callisto
- PS018 **PROCKTER, L.M.; HEAD III, J.W.; PAPPALARDO, R.T.; SENSKE, D.; NEUKUM, G.; GREELEY, R.; GALILEO SSI TEAM**  
Ganymede dark terrain morphology and tectonics: results from the first year of Galileo
- PS019 **JÖNS, H.-P.**  
On the origin of the etched terrain, Mars

\* not included in the Book of Abstracts

### PS3 Atmospheres of terrestrial planets, outer planets and moons I

Convener: Hourdin, F.  
Co-Convener(s): Lewis, S.R.  
**Tuesday, 21 April 1998**  
Lecture Room: M1  
Chairperson: Hourdin, F.

#### Inner planets

- 11:00 **KRASNOPOLSKY, V.A.; MUMMA, M.J.; GLADSTONE, G.R.**  
Detection of atomic deuterium on Mars (Solicited Paper)
- 11:30 **MOREAU, D.; MARTEN, A.; BIRAUD, Y.; MORENO, R.**  
Numerical study of spatial and seasonal distributions of trace gases in the Martian middle and lower atmosphere
- 11:45 **SCHIDLOWSKI, M.**  
Oxygenation of the terrestrial atmosphere: the role of biology
- 12:00 **ESTEVEZ, C.**  
A model for chloroacetaldehyde syntehsis from atmospheric precursors in the primitive Earth
- 12:15 **SOROKHTIN, O.G.; USHAKOV, S.A.; USHAKOVA, L.A.**  
Nature of greenhouse effect in the Earth atmosphere
- 12:30 **SHIZGAL, B.D.; ARKOS, G.G.**  
The dynamics and kinetic theory of the nonthermal escape of H and D from Mars and Venus by energetic oxygen atoms
- 12:45 **STUMPTNER, W.; LAMMER, H.; BAUER, S.J.**  
Intrinsic Martian magnetic field effect on Mars' atmospheric evolution
- 13:00 LUNCH

Chairperson: Read, P.

#### Martian meteorology and climate

- 14:00 **IVANOV, A.B.; MUHLEMAN, D.O.**  
Opacity of the Martian atmosphere from Mars orbiter laser altimeter observations (Solicited Paper)
- 14:30 **FORGET, F.; HOURDIN, F.; HOURDIN, C.; TALAGRAND, O.**  
GCM simulations of the dust cycle on Mars
- 14:45 **NEWMAN, C.E.; LEWIS, S.E.; READ, P.L.**  
A preliminary study of dust advection on Mars using winds from the Oxford Mars General Circulation Model
- 15:00 **WHITEHOUSE, S.G.; MOROZ, I.M.; READ, P.L.**  
An extremum principle for linearised vertical structure equations
- 15:15 **PETROSYAN, A.; HARRI, A.-M.**  
The mixing height of the Martian boundary layer, model predictions
- 15:30 **LEWIS, S.R.**  
Validation of a Martian general circulation model against recent observations from Mars Pathfinder and Mars Global Surveyor

Chairperson: Lewis, S.

### Titan

- 15:45 **LORENZ, R.D.**; LEMMON, M.T.; SMITH, P.H.  
Dramatic seasonal change on Titan observed by HST  
WFPC-2 (Solicited Paper)
- 16:15 **LEMMON, M.T.**; SMITH, P.H.; LORENZ, R.D.  
Space telescope imaging spectrograph observations  
of the troposphere and surface of Titan
- 16:30 SMITH, P.H.; LEMMON, M.; LORENZ, R.; WEST,  
R.  
NICMOS observations of Titan
- 16:45 **COUSTENIS, A.**; SCHMITT, B.; MCKAY, C.P.;  
LELLOUCH, E.; COMBES, M.; GENDRON, E.;  
WITTEMBERG, R.; MAILLARD, J.P.  
Ground-based observations of Titan's surface
- 17:00 END OF PART I

### **PS3 Atmospheres of terrestrial planets, outer planets and moons II**

Convener: Hourdin, F.  
Co-Convener(s): Lewis, S.R.  
**Wednesday, 22 April 1998**  
Lecture Room: M1  
Chairperson: Lewis, S.

### Titan (continued)

- 08:30 **DE BERGH, C.**; **COURTIN, R.**; GAUTIER, D.;  
OWEN, T.; TOKUNAGA, A.; LELLOUCH, E.;  
MARTEN, A.  
The abundance of CO in the lower troposphere of  
Titan from 1.6 micron spectroscopy
- 08:45 **HIDAYAT, T.**; MARTEN, A.  
Evidence for a stron  $^{15}\text{N}/^{14}\text{N}$  enrichment in Titan's  
atmosphere from millimeter observations
- 09:00 **HOURLIN, F.**; J. LUZ, D.  
Dynamics of Titan's atmosphere: implication of  
transient activity for the superrotation and transport  
of trace species
- 09:15 **RANNOU, P.**; HOURLIN, F.; MCKAY, C.P.;  
CABANE, M.  
Effects of haze and dynamics coupling in Titan's  
atmosphere
- 09:30 **LEBONNOIS, S.**; TOUBLANC, D.  
Modelling the seasonal variations in Titan's atmo-  
spheric composition
- 09:45 **CROKE, B.**; VARDAS, I.M.  
A radiative-convective/photochemical model for  
Titan's atmosphere
- 10:00 **GRARD, R.**  
Electrostatic charging processes in planetary atmo-  
spheres

Chairperson: Courtin, R.

### Jupiter

- 10:15 **IRWIN, P.G.J.**; TAYLOR, F.W.; CALCUTT, S.B.;  
WEIR, A.L.; SMITH, S.E.; LAMBERT, A.;  
CAMERON-SMITH, P.J.  
Galileo/NIMS determination of the deep composition  
and cloud structure of Jupiter (Solicited Paper)

- 10:45 **ROOS-SEROTE, M.**; DROSSART, P.;  
ENCRENAZ, TH.; CARLSON, R.W.; BAINES, K.;  
ORTON, G.  
Cloud opacity and water abundance variations in  
Jovian hot spots from Galileo/NIMS observations
- 11:00 **GUILLOT, T.**; TOMPKINS, A.M.; CRAIG, G.C.  
A terrestrial cloud ensemble model to study the  
atmospheres of the giant planets
- 11:15 **SKEET, D.R.**; **REED, P.L.**  
A fully stratified, primitive equation model of  
Jupiter's atmosphere
- 11:30 **LESUEUR, V.**; MANGENEY, A.; DROSSART, P.  
Numerical model of the atmospheric circulation of the  
outer planets
- 11:45 **KRASNOPOLSKY, V.A.**; CRUIKSHANK, D.P.  
A plausible version of Pluto's atmosphere
- 12:00 END OF SESSION
- 12:00 Business Meetings

### **PS3 Atmospheres of terrestrial planets, outer planets and moons - Poster Session**

Convener: Hourdin, F.  
Co-Convener(s): Lewis, S.R.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: AGORA 3 - PS

- PS035 **STUMPTNER, W.**; LAMMER, H.; BAUER,  
S.J.  
Intrinsic Martian magnetic field effect on Mars'  
atmospheric evolution
- PS036 **ANDREICHKOV, B.M.**  
Role of small components of atmosphere in  
shaping a surface and of a troposphere of Venus
- PS037 **SILLI, T.**; SAVIJÄRVI, H.; HARRI, A.-M.  
Modelling of local and regional weather phenom-  
ena in the Sagan memorail Station (Mars Path-  
finder) lading area during its operation
- PS038 **HARRI, A.-M.**; POLKKO, J.; SILLI, T.; CRISP,  
D.  
Pressure observations in the Martian southern  
polar region: MVACS/MET-P
- PS039 **LEWIS, S.R.**; COLLINS, M.; READ, P.L.;  
FORGET, F.; FOURNIER, R.; HOURLIN, C.;  
HOURLIN, F.; TALAGRAND, O.; HUOT, J.-P.  
A climate database for the Martian atmosphere
- PS040 **LAMMER, H.**; STUMPTNER, W.; BAUER,  
S.J.  
High-altitude haze effects on Titan's atmosphere
- PS041 **ARREGUI, J.**; ROJAS, J.F.; HUESO, R.;  
LECACHEUX, J.; COLAS, F.; SANCHEZ-  
LAVEGA, A.; DROSSART, P.  
Earth based observations of Jovian hot spots in  
the visual range: 1994-1997

PS

---

---

**Attend the Poster Session**

---

---

## PS4 Planetary magnetospheres and ionospheres I

Convener: Prangé, R.

Co-Convener(s): Dougherty, M.K.; Sauer, K.

Wednesday, 22 April 1998

Lecture Room: M1

Chairperson: Nagy, A.

### Plasma/dust interactions

- 14:00 **KRÜGER, H.**; GRÜN, E.; GALILEO AND ULYSSES DUST TEAMS  
Galileo observations of dust particles ejected from Jupiters Galilean satellites
- 14:15 **HECK, A.**; GRÜN, E.; KRÜGER, H.; LINKERT, G.; HORANYI, M.; HAMILTON, D.P.; POLANSKEY, C.  
Results of Jovian dust stream analysis
- 14:30 GRÜN, E.; KRÜGER, H.; HECK, A.; LINKERT, G.; HAMILTON, D.; HORANYI, M.; ZOOK, H.A.  
Angular momentum of Jovian dust stream particles
- 14:45 **POPEL, S.I.**  
Influence on the Earth's magnetosphere of a dust related to cosmic bodies

Chairperson: Banaszkiewicz, M.

### Mars and Venus

- 15:00 **REME, H.**; MAZELLE, C.; SAUVAUD, J.A.; D'USTON, C.; VIGNES, D.; LIN, R.P.; ANDERSON, K.A.; CARLSON, C.W.; MCFADDEN, J.; CURTIS, D.W.; MITCHELL, D.; ACUNA, M.H.; CONNERNEY, J.E.P.; WASILEWSKI, P.; CLOUTIER, P.; MAYHEW, M.; NESS, N.F.; BAUER, S.J.  
The solar wind-Mars interaction from the Mars global surveyor spacecraft measurements (Solicited Paper)
- 15:30 **MAZELLE, C.**; REME, H.; SAUVAUD, J.A.; D'USTON, C.; VIGNES, D.; ACUNA, M.H.; CONNERNEY, J.E.P.; WASILEWSKI, P.; LIN, R.P.; MITHCELL, D.L.; ANDERSON, K.A.; CARLSON, C.W.; MCFADDEN, J.; CURTIS, D.W.; CLOUTIER, P.; MAYHEW, M.; NESS, N.F.; BAUER, S.J.  
Kinetic characteristics of the solar wind interaction with Mars
- 15:45 **SKALSKY, A.**; KRASNOSEL'SKIKH, V.; GRARD, R.; SCHWINGENSCHUH, K.  
Low frequency turbulence at the Martian bow shock: PHOBOS-2 observations
- 16:00 **BAUSKE, R.**; **NAGY, A.F.**; DEZEEUW, D.L.; GOMBOSI, T.I.; POWELL, K.G.; LUHMAN, J.G.  
3D multiscale mass loaded MHD simulations of the solar wind interaction with Venus and Mars
- 16:15 **SAUER, K.**; DUBININ, E.  
Mars and its moons in the solar wind
- 16:30 **DUBININ, E.**; SAUER, K.; SKALSKY, A.; SZEGO, K.; DELVA, M.  
The foreshock boundary at Mars (Poster)
- 16:35 **DUBININ, E.**; SAUER, K.; BAUMGARTEL, A.; SRIVASTAVA, K.; TARASOV, V.  
Multiple shocks near Mars (Poster)

- 16:40 **LICHTENEGGER, H.**; **DUBININ, E.**  
Planetary ions in the Martian tail (Poster)
- 16:45 END PART I

## PS4 Planetary magnetospheres and ionospheres II

Convener: Prangé, R.

Co-Convener(s): Dougherty, M.K.; Sauer, K.

Thursday, 23 April 1998

Lecture Room: M1

Chairperson: Thomas, N.

### Ionospheres and magnetospheres of Galilean satellites

- 09:00 **KIVELSON, M.G.**; KHURANA, K.K.  
Galilean moons of Jupiter: magnetospheres and wakes (Solicited Paper)
- 09:30 **BANASZKIEWICZ, M.**; LARA, L.; RODRIGO, R.; LOPEZ-MORENO, J.J.; MOLINA-CUBEROS, G.  
A coupled model of the ionosphere and the upper atmosphere of Titan
- 09:45 **LILENSTEN, J.**; GALAND, M.; TOUBLANC, D.; MAURICE, S.  
The ionosphere of Titan: ideal diurnal and nocturnal cases
- 10:00 **KLIORE, A.J.**; HERRERA, R.G.; ASMAR, S.W.; HINSON, D.P.; TWICKEN, J.D.; FLASAR, F.M.; SCHINDER, P.D.  
The ionospheres of the Galilean satellites of Jupiter
- 10:15 **KOPP, A.**; IP, W.-H.; SCHRÖER, A.  
Comparative MHD simulations of the interaction of the Galilean satellites with the Jovian magnetosphere (Poster)
- 10:20 BREAK

Chairperson: Kivelson, M.

### Planetary magnetospheres: models

- 10:50 **FERRIERE, K.**; ZIMMER, C.; NEUBAUER, F.  
Centrifugal instability in rotating plasma disks
- 11:05 **GOMBOSI, T.I.**; DEZEEUW, D.L.; GROTH, C.P.T.; HANSEN, K.C.; MARSHALL, H.G.; POWELL, K.G.; STOUT, Q.F.  
Modelling the magnetospheres of Jupiter and Saturn with a 3D AMR MHD model
- 11:20 **WOODWARD, T.I.**; MCKENZIE, J.F.  
Waves in magnetized plasmas: two fluid wave equation formulation
- 11:35 **WOODWARD, T.I.**; MCKENZIE, J.F.  
Stationary incompressible MHD perturbations generated by a current source in a moving plasma
- 11:50 **SCOTT, J.G.**; ENGLE, I.M.  
A detailed mapping of the magnetopause surface of a global model of Mercury's magnetosphere
- 12:05 LUNCH

Chairperson: Gombosi, T.

### The Jovian magnetosphere: observations

- 14:00 **KHURANA, K.K.**; KIVELSON, M.G.  
The structure of Jupiter's magnetosphere: new observations from Galileo (Solicited Paper)

- 14:30 **DEDMAN, E.R.; DOUGHERTY, M.K.**  
Magnetic holes and upside-down waves in connection with Jovian mirror mode waves
- 14:45 **KRUPP, N.; WOCH, J.; LAGG, A.; LIVI, S.; WILKEN, B.; WILLIAMS, D.J.**  
Energetic particles in the Jovian magnetosphere: results from the Energetic Particles Detector (EPD) on board Galileo
- 15:00 **WOCH, J.; KRUPP, N.; LAGG, A.; WILKEN, B.; LIVI, S.; WILLIAMS, D.J.**  
Dynamics of the Jovian magnetotail
- 15:15 **LOUARN, P.; ROUX, A.; PERRAUT, S.; KURTH, W.; GURNETT, D.**  
A study of the large scale dynamics of the Jovian magnetosphere using the Galileo plasma wave experiment

Chairperson: Khurana, K.

- 15:30 **PRANGE, R.; LIVENGOOD, T.A.; CHAGNON, G.; KIVELSON, M.; KURTH, W.; ZARKA, P.; MAURICE, S.; FOUCHET, T.; BUDZIEN, S.**  
A study of the dynamics of auroral processes on Jupiter. Correlation with Galileo measurements
- 15:45 **MAI, H.; JOCKERS, K.**  
Observation of  $H_2\lambda=2.121\mu$  and  $H_3^+\lambda=2.093\mu$  emission in Jupiter's north polar cap shortly after the impact of comet SL9
- 16:00 **REGO, D.; ACHILLEOS, N.; STALLARD, T.; MILLER, S.; PRANGE, R.; DOUGHERTY, M.; JOSEPH, R.**  
Supersonic winds in the Jovian aurorae \*
- 16:15 **PALLIER, L.; PRANGE, R.**  
Far UV Jupiter's auroras images in high spatial resolution with finat object camera on post costar Hubble space telescope (Poster)
- 16:20 **QUEINNEC, J.; ZARKA, P.**  
Io-controlled decameter arcs and Io-Jupiter interaction
- 16:35 **THOMAS, N.; LICHTENBERG, G.**  
Ion temperatures in the Io plasma torus
- 16:50 **DULK, G.A.; LEBLANC, Y.; SAULT, R.J.; BOLTON, S.J.**  
The asymmetric brightness of Jupiter's radiation belts, and variations with  $D_E$
- 17:05 **END OF SESSION**

#### PS4 Planetary magnetospheres and ionospheres - Poster Session

Convener: Prangé, R.

Co-Convener(s): Dougherty, M.K.; Sauer, K.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 3 - PS

Chairperson: N.N.

- PS042 **KOPP, A.; IP, W.-H.; SCHRÖER, A.**  
Comparative MHD simulations of the interaction of the Galilean satellites with the Jovian magnetosphere
- PS043 **PALLIER, L.; PRANGE, R.**  
Far UV Jupiter's auroras images in high spatial resolution with finat object camera on post costar Hubble space telescope

- PS044 **DUBININ, E.; SAUER, K.; SKALSKY, A.; SZEGO, K.; DELVA, M.**  
The foreshock boundary at Mars
- PS045 **DUBININ, E.; SAUER, K.; BAUMGARTEL, A.; SRIVASTAVA, K.; TARASOV, V.**  
Multiple shocks near Mars
- PS046 **LICHTENEGGER, H.; DUBININ, E.**  
Planetary ions in the Martian tail

#### PS5 Small bodies of the solar system I

Convener: Schwehm, G.H.

Co-Convener(s): Ulamec, S.

Thursday, 23 April 1998

Lecture Room: M4

Chairperson: N.N.

- 14:00 **DUXBURY, T.C.**  
The NASA Discovery STARDUST Project (Solicited Paper)
- 14:30 **SCHWEHM, G.H.**  
The international Rosetta mission (Solicited Paper)
- 15:00 **ULAMEC, S.; WITTMANN, K.; FEUERBACHER, B.; ROSENBAUER, H.; MUGNUOLO, R.; MOURA, D.; BIBRING, J.P.**  
Rosetta lander - in situ investigation of a cometary nucleus (Solicited Paper)
- 15:30 **PALUMBO, P.; GIADA TEAM**  
The GIADA experiment onboard Rosetta mission to comet 46P/Wirtanen: performances and capabilities
- 15:45 **MOTTOLA, S.; MICHAELIS, H.; NEUKUM, G.; ARNOLD, G.; HIRSCH, H.; JAUMANN, R.**  
The ROLIS imaging experiment on the Rosetta lander
- 16:00 **KNOLLENBERG, J.; KÜHRT, E.; SPOHN, T.**  
MUPUS-TM: IR-measurement of comet P/WIRTANEN's surface temperature
- 16:15 **BENKHOFF, J.**  
Influence of the energy input on the vapor flux and on the temperature distribution of comet nuclei
- 16:30 **END OF PART I**

#### PS5 Small bodies of the solar system - Poster Session

Convener: Schwehm, G.H.

Co-Convener(s): Ulamec, S.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 3 - PS

Chairperson: N.N.

- PS047 **HADAMCIK, E.; LEVASSEUR-REGOURD, A.C.; RENARD, J.C.; STEPNIK, B.**  
CCD polarimetric imaging of two short period comets: 81P/Wild 2 and 22P/Kopff
- PS048 **OBERC, P.**  
Modelling the number density profiles of secondary
- PS049 **HAGERMANN, A.; SPOHN, T.**  
Evaluation of MUPUS data and the inverse heat conduction problem
- PS050 **JUHASZ, A.; SZEGÖ, K.**  
Charged dust dynamics above the surface of a comet far from the Sun

PS



## PS5 Small bodies of the solar system II

Convener: Schwehm, G.H.  
Co-Convener(s): Ulamec, S.  
**Friday, 24 April 1998**  
Lecture Room: M4  
Chairperson: N.N.

- 09:00 **BARBIN, Y.**; **KOFMAN, W.**; **NIELSEN, E.**;  
**HAGFORS, T.**; **SEU, R.**; **PICARDI, G.**  
Consert experiment for the Rosetta mission
- 09:15 **SCHÖNEMANN, A.**; **ALTWEGG, K.**; **BALSIGER, H.**; **GEISS, J.**  
Upper limits for the hydrocarbons in the inner coma of comet P/Halley
- 09:30 **COSTA, J.**; **MÄKINEN, T.**; **BERTAUX, J.L.**;  
**QUEMERAIS, E.**; **KYRÖLÄ, E.**; **SCHMIDT, W.**;  
**LALLEMENT, R.**  
Monitoring of H<sub>2</sub>O production of several comets from LY-alpha measurements with SOHO/SWAN
- 09:45 **ROSENBAUER, H.**; **HILCHENBACH, M.**  
Evolution of the topography of revolving comets analysed by numerical modelling
- 10:00 **PÄTZOLD, M.**; **MAROUF, E.A.**  
Bistatic radar observations of cometary nuclei
- 10:15 **BREAK**

Chairperson: N.N.

- 11:00 **DESVOIVRES, E.**; **KLINGER, J.**; **LEVASSEUR-REGOURD, A.-C.**  
Dynamics of fragments of cometary nuclei: application to C/1996 B2 Hyakutake
- 11:15 **MUINONEN, K.**; **LAGERROS, J.S.V.**  
Inversion of shape statistics for small solar system bodies
- 11:30 **JOCKERS, K.**; **ROSENBUSH, V.**; **BONEV, T.**;  
**CREDNER, T.**  
Imaging polarimetry and colour in comet C/1996 Q1 (Tabur) at large phase angle
- 11:45 **BONEV, T.**; **JOCKERS, K.**; **CREDNER, T.**  
Ions in comets C/1996 Q1 (Tabur) and 46P/Wirtanen
- 12:00 **LANDGRAF, M.**; **GRÜN, E.**  
In situ interstellar dust flux measurements and their extrapolation to the interstellar medium
- 12:15 **BRUCATO, J.R.**; **COLANGELI, L.**; **MENNELLA, V.**;  
**BARATTA, G.A.**; **CIMINO, G.**; **PALUMBO, P.**;  
**STRAZZULLA, G.**; **BUSSOLETTI, E.**  
Cometary dust characterization by laboratory experiments on silicate grains
- 12:30 **KRASNOPOLSKY, V.A.**  
X-rays in comets: theory and observations
- 12:45 **MIKHAILOV, YU.M.**; **MASLENITSIN, S.F.**  
Regions and boundaries of cometary plasma environments
- 13:00 **END OF SESSION**

---

### Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00, Lecture Room M4

---

## PS6 Solar system radiophysics and related topics I

Convener: Barrow, C.H.  
Co-Convener(s): Aubier, M.G.  
**Monday, 20 April 1998**  
Lecture Room: M4  
Chairperson: Barrow, C.H.

### Solar

- 14:00 **BOUGERET, J.-L.**  
Radio sources associated with interplanetary CMEs (Solicited Paper)
- 14:30 **MANN, G.**  
Radio emission from shocks in the heliosphere (Solicited Paper)
- 15:00 **BOUGERET, J.-L.**; **HOAN, S.**; **ZARKA, P.**;  
**LEBLANC, Y.**; **DULK, G.**; **KERDRAON, A.**  
WIND/WAVES, Nancay decametric array and Nancay radio heliography observations of an interplanetary radio storm
- 15:15 **LEBLANC, Y.**; **DULK, G.A.**; **BOUGERET, J.-L.**  
Tracing the electron density from the corona to 1 AU
- 15:30 **KELLOGG, P.J.**; **LIN, N.**; **BASE, S.D.**  
Some wind and Ulysses observations relating to the origin of type III bursts (Solicited Paper)
- 16:00 **HOANG, S.**; **DULK, G.A.**; **BOUGERET, J.-L.**;  
**LEBLANC, Y.**  
Ulysses-Wind simultaneous observations of solar type III kilometric radio bursts associated with Langmuir waves
- 16:15 **END OF PART I**
- 17:00 **Opening**
- 19:30 **Reception**

## PS6 Solar system radiophysics and related topics II

Convener: Barrow, C.H.  
Co-Convener(s): Aubier, M.G.  
**Tuesday, 21 April 1998**  
Lecture Room: M4  
Chairperson: Rucker, H.

### Jupiter

- 08:45 **LOUARN, P.**; **ROUX, A.**; **PERRAUT, S.**; **KURTH, W.**;  
**GURNETT, D.**  
A global survey of the Jovian magnetosphere activity, possible relationship with the Io activity (Solicited Paper)
- 09:15 **ZARKA, P.**; **QUEINNEC, J.**  
Io-controlled decameter arcs an Io-Jupiter interaction
- 09:30 **BARROW, C.H.**; **KAISER, M.L.**  
The jovian HOM radio emission observed by WIND/WAVES and by ULYSSES/URAP
- 09:45 **KAISER, M.L.**; **MACDOWALL, R.J.**  
Jovian radio "bullseyes" observed by Ulysses URAP
- 10:00 **MONCUQUET, M.**; **BAGENAL, F.**; **MEYER-VERNET, N.**  
A new 2-D model of the Io plasma torus

- 10:15 SHAPOSHNIKOV, V.E.; ZAITSEV, V.V.;  
RUCKER, H.O.  
On the different ratio of linear to circular polarization in different sources of the Jovian decametric radio emission

10:30 BREAK

Chairperson: Aubier, M.

#### Jupiter S-bursts

- 11:00 KLEWEIN, P.  
Technical aspects in the observation of fast, time-varying radio emissions from sources in the solar system
- 11:15 LECACHEUX, A.; KLEWEIN, P.; BOUDJADA, M.Y.; CLERC, V.; DUBUY, F.; DE LASSUS, H.; MOREAU, PH.; ROSOLEN, C.; RUCKER, H.O.  
A digital spectrum analyzer for ground based decametric radio astronomy
- 11:30 RUCKER, H.O.; LECACHEUX, A.; BOUDJADA, M.Y.; GALOPEAU, P.; AUBIER, M.; MOREAU, P.; DUBUY, F.  
Simultaneous high resolution observation of a sequence of Jupiter millisecond bursts at Nancy (France) and Graz (Austria)
- 11:45 GALOPEAU, P.H.M.; BOUDJADA, M.Y.; RUCKER, H.O.  
Jovian S-burst drift model implying a parallel electric field
- 12:00 BOUDJADA, M.Y.; GALOPEAU, P.H.M.; RUCKER, H.O.; LECACHEUX, A.  
Jovian millisecond radio bursts: phenomenology and morphology
- 12:15 BOEV, A.G.; SHCHERBININA, T.E.  
To the formation mechanism of the decametric Jovian radioemission S-bursts with compound types of frequency drift
- 12:30 GARCZYNSKA, I.N.; ROMPOLT, B.; CADERSROKA, B.; TOMCZAK, M.; RAOULT, A.  
Study of two remote active regions connection on May 1993
- 12:45 END OF SESSION

### **PS7 Laboratory studies and observations on dust, ices and organics in the solar system I**

Convener: Ehrenfreund, P.  
Co-Convener(s): Kochan, H.  
**Wednesday, 22 April 1998**  
Lecture Room: M9  
Chairperson: Pirronello, V.  
Editors: Ehrenfreund, P.; Kochan, H.

#### Laboratory studies and observations on dust, ices and organics in the solar system and beyond

- 08:45 EHRENFREUND, P.; KOCHAN, H.  
Introduction
- 09:00 SCHMITT, B.; DOUTE, S.; QUIRICO, E.  
PS7-001 Ices in the solar system (Solicited Paper)

- 09:30 SATORRE, M.A.; BARATTA, G.A.;  
PS7-002 CASTORINA, A.C.; PALUMBO, M.E.; STRAZZULLA, G.  
CO/CO<sub>2</sub> molecular number ratio produced by ion irradiation of ices
- 09:45 HALLENBECK, S.; NUTH, J.  
PS7-003 Thermal evolution of amorphous magnesium silicate smokes (Solicited Paper)
- 10:15 OWEN, T.; GRIFFITH, C.; COUSTENIS, A.;  
PS7-004 ENCRENAZ, T.; GEBALLE, T.; HAN, B.  
ISO and ground-based observation of Titan in near-IR windows at 2.7 and 5 micron (Solicited Paper)
- 10:45 EHRENFREUND, P.  
PS7-005 Observations and laboratory studies of interstellar and cometary ices: an ISO view
- 11:00 BOCKELEER-MORVAN, D.; LIS, D.C.; WINK, J.;  
PS7-006 DESPOIS, D.; BENFORD, D.; BIVER, N.; COLOM, P.; CROVISIER, J.; DAVIES, J.K.; DENT, W.R.F.; GARDNER, M.; GAUTIER, D.; GERARD, E.; GERMAIN, B.; LELLOUCH, E.; MEHRINGER, D.; MORENO, R.; PAUBERT, G.; PHILLIPS, T.G.; RAUER, H.  
New molecular species in comet Hale-Bopp (Solicited Paper)

11:30 Poster Summaries

- PS7-007 WORMS, J.C.; HADAMCIK, E.; LEVASSEUR-REGOURD, A.C.; RENARD, J.B.  
Polarimetric measurements of scattered light by dust grains in microgravity conditions (PROGRA2 experiment)
- PS7-008 TANAKA, K.K.; TANAKA, H.; NAKAZAWA, K.  
Grain formation in ejecta of super nova: the effect due to the radiation
- PS7-009 SCHADE, U.; WÄSCH, U.  
NIR reflectance spectroscopy of Ca- and Fe-rich clinopyroxenes: relationship between spectral features and chemistry
- PS7-010 WÄSCH, R.; SCHADE, U.  
NIR reflectance spectroscopy of pyroxenes: ferroaugites; saites; hedenbergites
- PS7-011 LORENZ, R.D.  
Dielectric properties of water-ammonia ice mixtures
- PS7-012 ANDREICHKOV, B.M.; DOLNIKOV, G.G.; DIKOV, Y.U.P.  
Presentation of chemical comet model
- PS7-013 IBADINOV, K.H.I.  
Ice grains in comets: laboratory and numerical modelling
- PS7-014 IBADINOV, K.H.I.  
The general properties and formation cause of the dust bands in II type cometary tails
- 12:00 LUNCH
- 12:00 Business Meetings

Chairperson: Kochan, H.  
Editors: Ehrenfreund, P.; Kochan, H.

- 14:00 GOUNELLE, M.; ENGRAND, C.; MAURETTE, M.; KURAT, G.  
PS7-015 Observations on dust, water and organics present in "giant" Antarctic micrometeorites (Solicited Paper)

PS

- 14:30 **MOROZ, L.**; **ARNOLD, G.**; **WÄSCH, R.**;  
 PS7-016 **PIETERS, C.**  
 Spectral estimations of asteroid mineral compositions: effects of spectrally neutral components
- 14:45 **ELUSTONDO, F.**; **DALIBART, M.**; **MASCETTI, J.**;  
 PS7-017 **DEROUAULT, J.**  
 Matrix isolation spectroscopy study of iron reactivity towards PAHs (Solicited Paper)
- 15:15 **LLORCA, J.**  
 PS7-018 Hydrocarbon synthesis in cometary grains
- 15:30 **COTTIN, H.**; **GAZEAU, M.C.**; **RAULIN, F.**  
 PS7-019 S.E.M.A.Ph.Or.E COMETAIRE, a tool for the study of the photochemical decomposition of probable cometary large organic molecules
- 15:45 **PIRRONELLO, V.**; **BIHAM, O.**; **VIDALI, G.**  
 PS7-020 Laboratory simulations of surface reactions occurring in space (Solicited Paper)
- 16:15 **END OF PART I**

## **PS7 Laboratory studies and observations on dust, ices and organics in the solar system - Poster Session**

Convener: Ehrenfreund, P.  
 Co-Convener(s): Kochan, H.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
 Poster Area: AGORA 3 - PS  
 Chairperson: Pirronello, V.  
 Editors: Ehrenfreund, P.; Kochan, H.

- PS067 **WORMS, J.C.**; **HADAMCIK, E.**;  
 PS7-007 **LEVASSEUR-REGOURD, A.C.**; **RENARD, J.B.**  
 Polarimetric measurements of scattered light by dust grains in microgravity conditions (PROGRA2 experiment)
- PS068 **TANAKA, K.K.**; **TANAKA, H.**; **NAKAZAWA, K.**  
 PS7-008 Grain formation in ejecta of super nova: the effect due to the radiation
- PS069 **SCHADE, U.**; **WÄSCH, U.**  
 PS7-009 NIR reflectance spectroscopy of Ca- and Fe-rich clinophyroxenes: relationship between spectral features and chemistry
- PS070 **WÄSCH, R.**; **SCHADE, U.**  
 PS7-010 NIR reflectance spectroscopy of pyroxenes: ferroogites; sailtes; hedenbergites
- PS071 **LORENZ, R.D.**  
 PS7-011 Dielectric properties of water-ammonia ice mixtures
- PS072 **ANDREICHKOV, B.M.**; **DOLNIKOV, G.G.**;  
 PS7-012 **DIKOV, YU.P.**  
 Presentation of chemical comet model
- PS073 **IBADINOV, K.H.I.**  
 PS7-013 Ice grains in comets: laboratory and numerical modelling
- PS074 **IBADINOV, K.H.I.**  
 PS7-014 The general properties and formation cause of the dust bands in II type cometary tails

## **PS7 Laboratory studies and observations on dust, ices and organics in the solar system II**

Convener: Ehrenfreund, P.  
 Co-Convener(s): Kochan, H.  
**Thursday, 23 April 1998**  
 Lecture Room: M9  
 Chairperson: Ehrenfreund, P.  
 Editors: Ehrenfreund, P.; Kochan, H.

### Laboratory studies, theory and technology related to planetary space missions

- 08:45 **ARNOLD, G.**  
 PS7-021 Laboratory spectrophotometry of analog materials for studies of solid planetary surfaces (Solicited Paper)
- 09:15 **SVEDHEM, H.**; **DROLSHAGEN, G.**; **GRÜN, E.**;  
 PS7-022 **GRAFODATSKY, O.**; **PROKOPIEV, U.**  
 Measurements of meteoroids and debris from geostationary orbit by the GORID experiment
- 09:30 **KOCHAN, H.**; **RE, E.**; **NISTA, A.**; **BRIGHENTI, A.**;  
 PS7-023 **COSTE, P.**; **YLIKORPI, T.**; **GROMOV, V.V.**;  
**MATROSSOV, S.**; **MITSKVITCH, A.V.**;  
**YUDKIN, E.N.**  
 Development of small sampling systems for the investigation of planetary surfaces
- 09:45 **SRAMA, R.**; **GRUEN, E.**  
 PS7-024 The-Cassini dust experiment
- 10:00 **HAUDEBOURG, V.**; **CABANE, M.**;  
 PS7-025 **LEVASSEUR-REGOURD, A.-C.**  
 Theoretical photopolarimetric responses of fractal aggregates and the CODAG/ESA experiment
- 10:15 **KOSCHNY, D.**; **SCHWEHM, G.**; **ROTT, M.**  
 PS7-026 Low-velocity impact studies for the Rosetta mission
- 10:30 **BREAK**
- Chairperson: Ehrenfreund, P.  
 Editor: Kochan, H.
- 11:00 **PILLINGER, C.T.**; **SIMS, M.R.**  
 PS7-027 The Beagle lander for Mars Express (Solicited Paper)
- 11:30 **PALOMBA, E.**; **COLANGELI, L.**; **ESPOSITO, F.**;  
 PS7-028 **MENNELLA, V.**; **ROTUNDI, A.**; **BUSSOLETTI, E.**  
 Infrared reflectance spectra of Martian analogues
- 11:45 **BLECKA, M.I.**; **COLANGELI, L.**; **PALOMBA, E.**;  
 PS7-029 **ESPOSITO, F.**  
 Simulations of the Martian spectral radiance in the presence of atmospheric dust
- 12:00 **PICARDI, G.**; **SEU, R.**; **SORGE, S.**; **FEDERICO, C.**;  
 PS7-030 **OROSEI, R.**  
 Radar subsurface sounding in the Mars Express 2003 mission
- 12:15 **HAUS, R.**  
 PS7-031 Modelling of atmospheric dust emission and surface reflectance of Mars applying a radiative transfer simulation in the 2.0 and 2.7  $\mu\text{m}$  CO<sub>2</sub> bands
- 12:30 **JENNISKENS, P.**  
 PS7-032 The November 1998/99 Leonid meteor shower update (Solicited Paper)
- 13:00 **END OF SESSION**

## PS8 Meteorites and cosmochemistry

Convener: Jagoutz, E.  
Co-Convener(s): Robert, F.  
**Monday, 20 April 1998**  
Lecture Room: M1  
Chairperson: N.N.

- 09:00 CASANOVA, I.  
Cosmochemistry of reduced silicon in the solar nebula and planetary cores
- 09:15 MATAS, J.; GUYOT, F.; RICARD, Y.  
Metal-silicate interactions in meteorites
- 09:30 KRESTINA, N.; JAGOUTZ, E.; KURAT, G.  
Core-rim and rim-matrix relationships in individual chondrules as inferred from the Sm-Nd isotope data
- 09:45 BOGDANOVSKI, O.; LUGMAIR, G.W.; SHUKOLYUKOV, A.  
Excess <sup>53</sup>Cr in the primitive achondrite divnoe
- 10:00 BONINO, G.; CINI-CASTAGNOLI, G.; BHANDARI, N.; DELLA MONICA, P.; TARICCO, C.  
On the solar modulation of cosmogenic radioisotopes in meteorites over the last two centuries
- 10:15 KOCHMASOV, G.  
Felsic continents of Mars
- 10:30 END OF SESSION
- 17:00 Opening
- 19:30 Reception

## PS9 Lunar exploration I

Convener: Foing, B.H.  
Co-Convener(s): Hoffmann, H.  
**Thursday, 23 April 1998**  
Lecture Room: M9  
Chairperson: Foing, B.H.  
Editors: Foing, B.H.; Hoffmann, H.

- 14:00 BINDER, A.B.  
PS9-001 Lunar Prospector's polar orbit mapping mission (Solicited Paper)
- 14:30 WÄHLISCH, M.; HOFFMANN, H.; GIESE, B.; OBERST, J.; KOEHLER, U.; JAUMANN, R.  
PS9-002 Digital terrain model at the lunar south pole from Clementine data
- 14:45 PINET, P.C.; CHEVREL, S.; SHEVCHENKO, V.V.; DAYDOU, Y.  
PS9-003 Lunar regolith properties at Reiner gamma formation
- 15:00 KOEHLER, U.; JAUMANN, R.; NEUKUM, G.  
PS9-004 Stratigraphic relations and spectral characteristics of northern nearside light plains
- 15:15 HIESINGER, H.; KÖHLER, U.; JAUMANN, R.; NEUKUM, G.; HEAD III, J.W.  
PS9-005 Ages and TiO<sub>2</sub>-content of lunar basalts: a stratigraphic approach
- 15:30 BUSSEY, D.B.J.; SPUDIS, P.D.  
PS9-006 Analysis of lunar basins using Clementine data
- 15:45 JAUMANN, R.; HIESINGER, H.; HEAD III, J.W.  
PS9-007 Stratigraphic studies of the boundary region between Mare Serenitatis and Mare Tranquillitatis
- 16:00 SURKOV, YU.; MOSKALEVA, L.; SHCHEGLOV, O.; SHERETOV, E.  
PS9-008 Search of water on the Moon
- 16:15 IP, W.-H.  
PS9-009 Surface transport and storage of water on the Moon

- 16:30 WEITZ, C.; HEAD III, J.  
PS9-010 Explosive volcanic eruptions on the moon
- 16:45 END OF PART I

## PS9 Lunar exploration - Poster Session

Convener: Foing, B.H.  
Co-Convener(s): Hoffmann, H.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 3 - PS  
Editors: Foing, B.H.; Hoffmann, H.

- PS021 BANASZKIEWICZ, M.; GABRYSZEWSKI, R.; RATAJ, M.; ZARNOWIECKI, T.  
PS9-028 Observations of lunar sodium from the Lunarsat: a model
- PS022 BRAUN, H.M.; LENTZ, H.  
PS9-029 Measurement results of a stepped-frequency ground penetration radar test campaign in view of planetary exploration
- PS023 CIERPKA, K.; KIRSCH, E.; MALL, U.; WILKEN, B.; GLOECKLER, G.; GALVIN, A.; CHOTOO, K.  
PS9-030 Identification of lunar pick-up ions in interplanetary space: WIND/STICKS results
- PS024 KOCHMASOV, G.  
PS9-031 The deepest lunar spa basin and its infilling

## PS9 Lunar exploration II

Convener: Foing, B.H.  
Co-Convener(s): Hoffmann, H.  
**Friday, 24 April 1998**  
Lecture Room: M9  
Chairperson: Hoffmann, H.  
Editors: Foing, B.H.; Hoffmann, H.

- 08:30 LANGEVIN, Y.  
PS9-011 Scientific rationale for the new generation of lunar missions (Solicited Paper)
- 09:00 PETROVA, N.; GUSEV, A.  
PS9-012 Physical libration of the Moon and dissipative processes in lunar interior
- 09:15 MIZUTANI, H.; FUJIMURA, A.; HAYAKAWA, M.; TANAKA, S.; SHIRAISHI, H.; KOYAMA, J.; YAMADA, I.; MURAKAMI, H.; ISHIHARA, Y.; ITO, K.  
PS9-013 The Japanese lunar mission: Lunar - A (Solicited Paper)
- 09:45 KAWANO, N.; OOE, M.; NAMIKI, N.  
PS9-014 Selenodesy from differential VLBI, relay satellite and laser altimeter experiments
- 10:00 BRAUN, H.M.; MAVROCORDATES, C.  
PS9-015 Simulation and performance prediction of an orbiter based planetary ground penetration radar
- 10:15 IWATA, T.  
PS9-016 Japanese SELENE status quo \*
- 10:30 BREAK

Chairperson: Hoffmann, H.  
Editors: Foing, B.H.; Hoffmann, H.

- 11:00 RACCA, G.D.; FOING, B.H.  
PS9-017 ESA SMART-1 potential science from lunar orbit \*

- 11:15 **TAKEUCHI, S.**; HARUYAMA, J.-I.; OTAKE, H.;  
 PS9-018 **MATSUNAGA, T.**  
 Lunar imager/spectrometer of SELENE mission
- 11:30 **FOING, B.H.**; EUROMOON TEAM  
 PS9-019 Science goals and model payload for EUROMOON  
 \* (Solicited Paper)
- 12:00 **BUSSEY, D.B.J.**; SPUDIS, P.D.  
 PS9-020 Darkness at the lunar south pole, as seen by  
 Clementine
- 12:15 **KMINEK, G.**; FOING, B.H.; EUROMOON, TEAM  
 PS9-021 Lunar surface science from EUROMOON rovers \*
- 12:30 **HYVÖNEN, P.**; RIEMANN, R.; ECKART, P.;  
 WAHLUND, J.E.; LUNARSAT TEAM  
 PS9-022 Lunarsat: a low-cost lunar micro-orbiter \*
- 12:45 **YUNG, K.L.**; NG, T.C.; CHAN, C.C.; YU, C.H.  
 PS9-032 Performance analysis of 2 versus 3-jaws tools for  
 autonomous geological sampling on remote planet
- 13:00 LUNCH

Chairperson: Foing, B.H.

Editors: Foing, B.H.; Hoffmann, H.

- 14:00 **RIEMANN, R.**; HYVONEN, P.; WAHLUND,  
 PS9-023 J.-E.; ECKART, P.  
 LunarSat science experiments
- 14:15 **HOFFMANN, H.**; GROTHUES, H.-G.;  
 PS9-024 **MICHAELIS, H.**; NEUKUM, G.  
 High resolution orbiter camera for the EUROMOON  
 orbital phase
- 14:30 **LASSEUR, CH.**; VERSTRAETE, W.; GROS, J.B.;  
 PS9-025 **GAUDIA, F.**; RICHLET, J.; DUBERTRET, G.;  
 DIELS, L.  
 MELISSA: preparation of flight experiments
- 14:45 **FELDMAN, W.C.**; BINDER, A.B.; MAURICE, S.;  
 PS9-026 **LAWRENCE, D.J.**; BARRACLOUGH, B.J.;  
 ELPHIC, R.C.  
 Search for deposits of water ice at the lunar poles:  
 first results from Lunar Prospector \*
- 15:00 **MAURICE, S.**; FELDMAN, W.C.; BINDER, A.B.;  
 PS9-027 **LAWRENCE, D.J.**; BARRACLOUGH, B.J.;  
 ELPHIC, R.C.  
 Effects of surface temperature on leakage spectra of  
 thermal neutrons from the Moon: first results from  
 Lunar Prospector \*
- 15:15 **INTERNATIONAL LUNAR EXPLORATION  
 WORKING GROUP**  
 Panel discussion on future lunar exploration and  
 space agencies plans (Solicited Paper)
- 15:45 Concluding Remarks
- 16:00 END OF SESSION

## **PS10 Interrelations between asteroids, near-Earth asteroids and meteorites**

Convener: Froeschlé, C.

Co-Convener(s): Morbidelli, A.

**Monday, 20 April 1998**

Lecture Room: M4

Chairpersons: Morbidelli, A.; Grieve, R.A.F.

- 09:00 **GRIEVE, R.A.F.**  
 Terrestrial impact structures; an incomplete record  
 of the impact flux throughout geologic time (Solic-  
 ited Paper)

- 09:30 **MUINONEN, K.**; VIRTANEN, J.; BOWELL, E.  
 Planetary collision probability for single-apparition  
 asteroids
- 09:45 **DOTTO, E.**; BARUCCI, M.A.;  
 DORESSOUNDIRAM, A.; FULCHIGNONI, M.  
 Asteroid spectra and meteorite types
- 10:00 **OBERT, J.**; MOTTOLA, S.; HAHN, G.; HARRIS,  
 A.; GIESE, B.; WAGNER, R.; NELSON, R.; DS-1  
 SCIENCE TEAM  
 3352 McAuliffe: orbit and physical model of the  
 DS-1 target asteroid
- 10:15 BREAK

Chairpersons: Froeschlé, C.; Hahn, G.

- 10:45 **GLADMAN, B.**  
 Dynamical interrelations between meteorites, neas,  
 comets, and asteroids (Solicited Paper)
- 11:15 **MICHEL, P.**  
 Dynamical evolution of near-Earth asteroids
- 11:30 **NESVORNY, D.**  
 Chaotic diffusion and the origin of NEA's
- 11:45 **BOTTKE, W.F.**; JEDICKE, R.; SPAHR, T.;  
 MORBIDELLI, A.  
 Debiasing the detected population of NEOs (Solicit-  
 ed Paper)
- 12:15 **HAHN, G.**; HOFFMANN, M.; MOTTOLA, S.;  
 NEUKUM, G.; SCHOLL, H.; MAURY, A.  
 The O.C.A.-DLR Asteroid Survey (O.D.A.S.)
- 12:30 **VOKROUHLICKY, D.**  
 Yarkovsky thermal effects as a source of mobility  
 for asteroidal fragments
- 12:45 **SCHERER, K.**  
 On the orbits of  $\beta$ -Meteoroids,  $\beta > 1$
- 13:00 **BABADZHANOV, P.B.**  
 Near-Earth asteroids associated with meteor showers
- 13:15 END OF SESSION
- 17:00 Opening
- 19:30 Reception

## **PS11 Observation of solar-system objects with ISO I**

Convener: Encrenaz, T.

Co-Convener(s): Grün, E.

**Monday, 20 April 1998**

Lecture Room: M2

Co-sponsored by: ESA

Chairperson: Encrenaz, T.

### Planets

- 09:00 **FEUCHTGRUBER, H.**; LELLOUCH, E.;  
 ENCRENAZ, T.; BEZARD, B.; DE GRAAUW, T.;  
 DAVIES, G.R.  
 Observations of the giant planets with ISO-SWS:  
 evidence for external oxygen and determination of  
 the D/H ratio (Solicited Paper)
- 09:30 **DAVIS, G.R.**; GRIFFIN, M.J.; NAYLOR, D.A.;  
 OLDHAM, P.G.; SIDHER, S.D.; SWINYARD,  
 B.M.; GAUTIER, D.; IRWIN, P.G.J.; ORTON, G.S.;  
 ADE, P.A.R.; BURGDORF, M.  
 Observations of the giant planets with ISO/LWS:  
 determination of the D/H ratio (Solicited Paper)

- 10:00 BEZARD, B.  
Observations of hydrocarbons in the giant planets  
with ISO-SWS (Solicited Paper)
- 10:30 BREAK

Chairperson: Feuchtgruber, H.

- 11:00 ROMANI, P.N.; BEZARD, B.; ENCRENAZ, T.;  
FEUCHTGRUBER, H.  
Detection of methyl radical in Neptune's atmosphere  
from ISO-SWS observations
- 11:15 DROSSART, P.  
Jupiter and Saturn at 2.5-5 micrometers: comparison  
of ISO/SWS and Galileo/NIMS (Solicited Paper)
- 11:45 FOUCHET, T.; ENCRENAZ, TH.; DROSSART,  
P.; FEUCHTGRUBER, H.; LELLOUCH, E.;  
BEZARD, B.; DE GRAAUW, TH.  
Observations of Jupiter with ISO-SWS: temperature  
and composition of the stratosphere and upper  
troposphere
- 12:00 MORRIS, P.; DE GRAAUW, TH.; ENCRENAZ, T.  
Martian mineralogy from mid-infrared spectra:  
prospects with new short wavelength spectrometer  
observations
- 12:15 ENCRENAZ, TH.; LELLOUCH, E.;  
FEUCHTGRUBER, H.; DE GRAAUW, TH.; DA-  
VIS, G.R.; PAUBERT, G.; GULKIS, S.  
A study of the water vertical distribution on Mars  
from ISO and IRAM measurements

#### Satellites and outer solar-system bodies

- 12:30 SCHMITT, B.; LELLOUCH, E.; DOUTÉ, S.;  
FEUCHTGRUBER, H.; DE BERGH, C.;  
DESCAMPS, P.; CROVISIER, J.  
The spectrum of Io from ISO-SWS observations  
(Solicited Paper)
- 13:00 LUNCH

Chairperson: Bézard, B.

- 14:00 LICHTENBERG, G.; THOMAS, N.  
Observations of SIV in the Io plasma torus with ISO
- 14:15 COUSTENIS, A.; ENCRENAZ, TH.; SALAMA,  
A.; LELLOUCH, E.; GAUTIER, D.; KESSLER,  
M.F.; DE GRAAUW, TH.; SAMUELSON, R.E.;  
BJORAKER, G.L.; ORTON, G.; WITTEMBERG,  
R.  
Titan thermal emission from ISO observations  
(Solicited Paper)
- 14:45 COURTIN, R.; LELLOUCH, E.; BILLEBAUD, F.;  
CLAES, P.; NOLL, K.  
The 5-to-7 micron spectrum of Titan
- 15:00 OWEN, T.; CRUIKSHANK, D.P.; ROUSH, T.;  
GEBALLE, T.; DALLEORE, C.; MEIER, R.  
The dark side of Iapetus (Solicited Paper)
- 15:30 LELLOUCH, E.; SCHMITT, B.; LAURCIJS, R.;  
QUIRICO, E.; DE BERGH, C.; CROVISIER, J.;  
COUSTENIS, A.  
Isophot observations of the Pluto/Charon system
- 15:45 THOMAS, N.; IP, W.-H.; FITZSIMMONS, A.;  
HAHN, G.; KELLER, H.U.; RAUER, H.; WIL-  
LIAMS, I.  
ISO observations of Kuiper Belt Objects

#### Comets, zodiacal light and asteroids

- 16:00 BOCKELEEE-MORVAN, D.; CROVISIER, J.;  
LEECH, K.; BROOKE, T.Y.; HANNER, M.S.;  
ALTIERI, B.; KELLER, H.U.; LELLOUCH, E.;  
LIM, T.  
The infrared spectrum of comet Hale-Bopp observed  
by ISO (Solicited Paper)
- 16:30 END OF PART I
- 17:00 Opening
- 19:30 Reception

### **PS11 Observation of solar-system objects with ISO II**

Convener: Encrenaz, T.  
Co-Convener(s): Grün, E.  
**Tuesday, 21 April 1998**  
Lecture Room: M2  
Co-sponsored by: ESA  
Chairperson: Grün, E.

- 09:00 PESCHKE, S.B.; GRUEN, E.; ISOPHOT COMET  
TEAM  
Observations of distant comets with ISO (Solicited  
Paper)
- 09:30 COLANGELI, L.; EPIFANI, E.; FULLE, M.;  
MENNELLA, V.; PALUMBO, P.; ROTUNDI, A.;  
BUSSOLETTI, E.  
Analysis of the cometary dust environment by means  
of ISOCAM imaging
- 09:45 ABRAHAM, P.; LEINERT, CH.; LEMKE, D.  
Observation of the zodiacal light with ISO (Solicited  
Paper)
- 10:15 MÜLLER, T.G.; LAGERROS, J.S.V.;  
BURGDORF, M.; LIM, T.; MORRIS, P.;  
SALAMA, A.; SCHULZ, B.; VANDENBUSSCHE,  
B.  
Fundamental thermal emission parameters of CERES  
- derived from ISO observations
- 10:30 MÜLLER, T.G.; LAGERROS, J.S.V.; SCHULZ, B.  
Asteroids as far-infrared standards for calibrating  
isophot
- 10:45 END OF SESSION

### **PS11 Observation of solar-system objects with ISO - Poster Session**

Convener: Encrenaz, T.  
Co-Convener(s): Grün, E.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 3 - PS  
Co-sponsored by: ESA

- PS051 OLDHAM, P.G.; DAVIS, G.R.; GRIFFIN, M.J.;  
NAYLOR, D.A.; SWINYARD, B.M.; IRWIN,  
P.G.J.; ORTON, G.S.; ADE, P.A.R.;  
BURGDORF, M.J.  
Observations of Jupiter and Saturn with  
ISO/LWS: measurement of the grating spectrum  
and detection of methane

PS

- PS052 **NAYLOR, D.A.**; DAVIS, G.R.; GRIFFIN, M.J.; OLDHAM, P.G.; SWINYARD, B.M.; IRWIN, P.G.J.; ORTON, G.S.; ADE, P.A.R.; BURGDORF, M.; ENCRENAZ, TH.; DE GRAAUW, T.  
Observations of Jupiter and Saturn with ISO/LWS: measurement of the Fabry-Perot spectrum
- PS053 **ATREYA, S.K.**; ENCRENAZ, TH.; BEZARD, B.; FEUCHTGRUBER, H.; LELLOUCH, E.; BISHOP, J.; EDINGTON, S.; DE GRAAUW, TH.; DAVIS, G.R.; KESSLER, M.F.  
ISO observations of Uranus: the stratospheric distribution of  $C_2H_2$  and the eddy diffusion coefficient
- PS054 **BURGDORF, M.J.**; DAVIS, G.R.; GRIFFIN, M.J.; OLDHAM, P.G.; SWINYARD, B.M.; ORTON, G.S.; ADE, P.A.R.; NAYLOR, D.A.; ENCRENAZ, TH.; DE GRAAUW, TH.; LELLOUCH, E.  
Observations of Neptune with ISO/LWS
- PS055 **HERAS, A.M.**; FEUCHTGRUBER, H.; LAHUIS, F.; LELLOUCH, E.; LEECH, K.; LORENTE, R.; MORRIS, P.; SALAMA, A.; VANDENBUSSCHE, B.; WIEPRECHT, E.  
ISO spectroscopic observations of atmospheric components on Jupiter and Saturn satellites
- PS056 **FEUCHTGRUBER, H.**; BURGDORF, M.; HERAS, A.M.; LAHUIS, F.; LEECH, K.; LIM, T.; LORENTE, R.; MORRIS, P.W.; PEZZUTO, S.; SALAMA, A.; TOMMASI, E.; VANDENBUSSCHE, B.; WIEPRECHT, E.; GRIFFIN, M.; OLDHAM, P.G.; DAVIES, G.R.; SWINYARD, B.M.  
ISO spectra of Callisto and Ganymede from 2.38-196 micron
- PS057 **CROVISIER, J.**; ENCRENAZ, T.; LELLOUCH, E.; BOCKELEE-MORVAN, D.; ALTIERI, B.; LEECH, K.; SALAMA, A.; BALUTEAU, J.P.; GRIFFIN, M.; DE GRAAUW, T.; VAN DISHOECK, E.; KNACKE, R.; BROOKE, T.Y.  
Spectroscopic observations of short-period comets with ISO
- PS058 **WIDEMANN, T.**  
Ground observation and detection of molecular lines of C/1995 O1 Hyakutake and C/1997 O<sub>2</sub> Hale-Bopp in telluric water vapor absorption band near 9360
- PS059 **MORRIS, P.**; VANDENBUSSCHE, B.; FEUCHTGRUBER, H.; HERAS, A.M.; LAHUIS, F.; LEECH, K.; LORENTE, R.; SALAMA, A.; WIEPRECHT, E.  
SWS spectral scans of asteroid 4 Vesta
- PS060 **VANDENBUSSCHE, B.**; SALAMA, A.; FEUCHTGRUBER, H.; HERAS, A.M.; LAHUIS, F.; LEECH, K.; LORENTE, R.; MORRIS, P.; WIEPRECHT, E.  
ISO-SWS spectra of the major asteroid classes: clues to mineralogy and chemistry of the solar system
- PS061 **BARUCCI, M.A.**; CROVISIER, J.; DORESSOUNDIRAM, A.; DOTTO, E.; ENCRENAZ, TH.; FULCHIGNONI, M.; KNACKE, R.F.; LELLOUCH, E.  
ISO observations of asteroids

## PS12 Planet formation and extra-solar planets I

Convener: Barge, P.

Co-Convener(s): Morfill, G.E.

**Tuesday, 21 April 1998**

Lecture Room: M4

Co-sponsored by: Lab. d'Astronomie Spatiale, IAU, COSPAR, CNRS, INSU, CNES

Chairperson: Mayor, M.

Editors: Barge, P.; Morfill, G.E.

14:00 **TANAKA, H.**; IDA, S.

PS12-001 Growth of a migrating protoplanet (Solicited Paper)

14:30 **TRILLING, D.E.**; LUNINE, J.I.; BENZ, W.;

PS12-002 **GUILLLOT, T.**; HUBBARD, W.B.; BURROWS, A.  
Migration and evolution of extrasolar planets

14:45 **ATHANASSOULA, A.**; BARGE, P.

PS12-003 Planetesimal dynamics with a massive perturber

15:00 **LISSAUER, J.J.**

PS12-004 Theories of giant planet formation (Solicited Paper)

15:30 **ZIGLINA, I.N.**; MAKALKIN, A.B.;

PS12-005 **DOROFEEVA, V.A.**; SAFRONOV, V.S.

Mass and heat transfer related to infall of the envelope onto the protoplanetary disk

15:45 **CHAVANIS, P.H.**; PROVENZALE, A.; BARGE, P.;

PS12-006 **SOMMERIA, J.**

Trapping of dust by coherent vortices in protoplanetary disks

16:00 **GUILLLOT, T.**

PS12-007 Giant planet formation: learning from the inside

16:15 **KIMURA, H.**; MANN, I.

PS12-008 Radiation pressure on dust aggregates in circumstellar disks

16:30 END OF PART I

## PS12 Planet formation and extra-solar planets II

Convener: Barge, P.

Co-Convener(s): Morfill, G.E.

**Wednesday, 22 April 1998**

Lecture Room: M4

Co-sponsored by: Lab. d'Astronomie Spatiale, IAU, COSPAR, CNRS, INSU, CNES

Chairperson: Lissauer, J.J.

Editors: Barge, P.; Morfill, G.E.

09:00 **BUTLER, P.**

PS12-009 The discovery of extrasolar planets (Solicited Paper)

09:30 **MAYOR, M.**; BEUZIT, J.-L.; MARIOTTI, J.-M.;

PS12-010 **NAEF, D.**; PERRIER, C.; QUELOZ, D.; SIVAN, J.-P.

The Haute-Provence Observatory giant planet survey

09:45 **ROUAN, D.**; LEGER, A.; BARGE, P.;

PS12-011 **SCHNEIDER, J.**

Searching for planets with the Corot space mission

10:00 **SCHNEIDER, J.**

PS12-012 How to search for rings and satellites of extra-solar planets

10:15 **RAUER, H.**; SCHNEIDER, H.;

PS12-013 **BOCKELEE-MORVAN, D.**; COUSTENIS, A.; CHASSEFIERE, E.; GUILLLOT, T.

Search for an extended exosphere around 51 Peg B with ISO

10:30 **MARLEY, M.; GELINO, C.; STEPHENS, D.;**  
 PS12-014 **LUNINE, J.**  
 What can we learn from extrasolar giant planets?  
 10:45 Concluding Remarks  
 11:00 END OF SESSION  
 12:00 Business Meetings

## PS12 Planet formation and extra-solar planets - Poster Session

Convener: Barge, P.  
 Co-Convener(s): Morfill, G.E.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
 Poster Area: AGORA 3 - PS  
 Co-sponsored by: Lab. d'Astronomie Spatiale, IAU, COSPAR, CNRS, INSU, CNES  
 Editors: Barge, P.; Morfill, G.E.

PS064 **GELINO, C.R.; MARLEY, M.; STEPHENS, D.;**  
 PS12-016 **LUNINE, J.**  
 Model bond albedos of extra-solar giant planets  
 PS065 **DELEUIL, M.**  
 PS12-017 **Spectroscopic observation of the  $\beta$  pictoris disk with ISO**  
 PS066 **MANN, I.; HANNER, M.**  
 PS12-018 **Solar system dust beyond the asteroid belt**

## PS13 Mars Pathfinder Mission: Update I

Convener: Keller, H.U.  
 Co-Convener(s): Golombek, M.P.; Wänke, H.  
**Tuesday, 21 April 1998**  
 Lecture Room: IRIS  
 Chairperson: Keller, H.U.

08:30 **GOLOMBEK, M.P.**  
 The Mars Pathfinder mission and science results (Solicited Paper)  
 08:55 **SMITH, P.H.**  
 The Imager for Mars Pathfinder experiment (IMP) (Solicited Paper)  
 09:20 **RIEDER, R.; WÄNKE, H.; BRÜCKNER, J.; DREIBUS, G.; ECONOMOU, T.; TURKEVICH, A.; CRISP, J.; MCSWEEN, H.Y.**  
 The chemical composition of Martian soil and rocks at the Pathfinder landing site: current results from APX measurements (Solicited Paper)  
 09:45 **WILSON, G.; ET AL**  
 An overview of the Mars Pathfinder Atmospheric Structure Instrument/Meteorologic Experiment (ASI/MET) \* (Solicited Paper)  
 10:10 **KNUDSEN, J.M.**  
 On the origin of the martian dust \* (Solicited Paper)  
 10:35 BREAK

Chairperson: Golombek, M.P.

11:00 **JAUMANN, R.; HAUBER, E.; OBERST, J.; MATZ, K.-D.; TRAUTHAN, F.**  
 Surface morphology at the Pathfinder landing site (Solicited Paper)

11:25 **JOHNSON, J.R.; SODERBLOM, L.; KIRK, R.; GADDIS, L.; SMITH, P.H.; LEMMON, M.; BRITT, D.; THOMAS, N.; BELL, J.; BRIDGES, N.T.; ANDERSON, R.; MURCHIE, S.M.; DUMMEL, A.; ARNOLD, G.; LAMPEN, P.; TRAUTHAN, F.**  
 Photometry of selected material at the Mars Pathfinder landing site (Solicited Paper)  
 11:50 **THOMAS, N. ET AL**  
 Dust in the Martian ..... \* (Solicited Paper)  
 12:15 **YODER, C.F.; FOLKNER, W.M.; YUAN, D.N.; STANDISH, E.M.; STANDISH, R.A.**  
 Mars' rotation and precession from Pathfinder and Viking radio tracking data (Solicited Paper)  
 12:40 LUNCH

Chairperson: Smith, P.

14:00 **SMITH, D.E.; ZUBER, M.T.; GARVIN, J.B.; HEAD, J.W.; FREY, H.V.; MUHLEMAN, D.O.; PHILLIPS, R.J.; SOLOMON, S.C.; PETTENGILL, G.H.; ZWALLY, H.J.; BANERDT, W.B.; DUXBURY, T.C.**  
 Early results from the Mars Orbiter Laser Altimeter experiment: an overview (Solicited Paper)  
 14:25 **MAGALHAES, J.A.; SEIFF, A.; SCHOFIELD, J.T.; BARNES, J.R.; CRISP, D.; HABERLE, R.; LARSEN, S.; MURPHY, J.; WILSON, G.**  
 Latest results from the Mars Pathfinder: atmospheric structure investigation  
 14:40 **WILSON, G.R.; LARSON, S.; MURPHY, J.R.; SEIFF, A.; HABERLE, R.M.; MAGALHAES, J.; CRISP, D.; SCHOFIELD, J.T.; BARNES, J.R.**  
 The Martian surface boundary layer: latest results from Mars Pathfinder  
 14:55 **JORGENSEN, H.E.; LANDBERG, L.; LARSEN, S.E.; MURPHY, J.R.; TILLMAN, J.E.; WILSON, G.R.**  
 Turbulence moments and spectra in the Martian atmospheric surface boundary layer  
 15:10 **HABERLE, R.; JOSHI, M.; MURPHY, J.; HOLLINGWORTH, J.; BARNES, J.; SCHAEFFER, J.**  
 GCM simulations of the Mars Pathfinder ASI/MET data  
 15:25 **LEMMON, M.T.; SMITH, P.H.; TOMASKO, M.G.**  
 Imager for Mars Pathfinder observations of aerosol structure: twilight, clouds, and dust  
 15:40 **TITOV, D.V.; MARKIEWICZ, W.J.; THOMAS, N.; KELLER, H.U.; SABLOTNY, R.; LEMMON, M.; TOMASKO, M.; SMITH, P.**  
 Measurements of the atmospheric water vapour on Mars by the imager for Mars Pathfinder  
 15:55 **MARKIEWICZ, W.J.; SABLOTNY, R.M.; THOMAS, N.; KELLER, H.U.; TITOV, D.; SMITH, P.**  
 Optical properties of the Martian aerosols as derived from Imager for Mars Pathfinder midday sky brightness data

\* not included in the Book of Abstracts

PS



- 16:10 KIRK, R.; ANDERSON, J.; BARRETT, J.; BECKER, K.; BECKER, T.; BENNETT, A.; BLUE, J.; COOK, D.; ELIASON, E.; GADDIS, L.; GARCIA, P.; GORDON, M.; HARE, T.; HOWINGTON-KRAUS, A.; ISBELL, C.; JOHNSON, J.; LEE, E.; MORGAN, H.; REDDING, B.; ROSANOVA, T.; SODERBLOM, L.; SUCHARSKI, R.; SUCHARSKI, T.; THOMPSON, K.; TORSON, J.; WEARD, W.; DORRER, E.; SMITH, P.; BRITT, D.; PATHFINDER SCIENCE TEAM  
Mapping the Sagan Memorial station site with the IMP camera (Poster)
- 16:13 MADSEN, M.B.; HVIID, S.F.; GUNNLAUGSSON, H.P.; KNUDSEN, J.M.; GOETZ, W.; DINESEN, A.R.; MOGENSEN, C.T.; PEDERSEN, C.T.; HARGRAVES, R.B.  
The magnetic properties instruments on Mars Pathfinder. Possible use in future missions (Poster)
- 16:16 REID, R.J.; SMITH, P.H.; THOMAS, N.; DUMMEL, A.  
IMP image calibration (Poster)
- 16:19 SABLONY, R.M.; MARKIEWICZ, W.J.; THOMAS, N.; KELLER, H.U.  
Reflection functions of Martian soils near the Carl-Sagan-Memorial-Station (Poster)
- 16:22 SODERBLOM, L.; ANDERSON, J.; BARRETT, J.; BECKER, K.; BECKER, T.; BENNETT, A.; BLUE, J.; COOK, D.; ELIASON, E.; GADDIS, L.; GARCIA, P.; GORDON, M.; HARE, T.; HOWINGTON-KRAUS, A.; ISBELL, C.; JOHNSON, J.; KIRK, R.; LEE, E.; MORGAN, H.; REDDING, B.; ROSANOVA, T.; SUCHARSKI, R.; SUCHARSKI, T.; THOMPSON, K.; TORSON, J.; WARD, W.; SMITH, P.; BRITT, D.; PATHFINDER SCIENCE TEAM  
The Mars Pathfinder super pan: USGS analysis and processing (Poster)
- 16:25 SOHL, F.; SPOHN, T.  
The sulfur content of the Martian core revisited: conclusions from Mars Pathfinder tracking (Poster)
- 16:28 WUTTKE, M.W.; THMOAS, N.; KELLER, H.U.; SMITH, P.H.; STOKER, C.; BLACKMON, T.  
Monte Carlo modelling of the diffuse flux near rocks (Poster)
- 16:31 END OF PART I

---

## Planetary and Space Science

---

an official journal of the EGS for the publication of your results presented at the 23rd General Assembly

---

## PS13 Mars Pathfinder Mission: Update - Poster Session

Convener: Keller, H.U.

Co-Convener(s): Golombek, M.P.; Wänke, H.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - PS

Chairperson: Johnson, J.R.

- PS027 KIRK, R.; ANDERSON, J.; BARRETT, J.; BECKER, K.; BECKER, T.; BENNETT, A.; BLUE, J.; COOK, D.; ELIASON, E.; GADDIS, L.; GARCIA, P.; GORDON, M.; HARE, T.; HOWINGTON-KRAUS, A.; ISBELL, C.; JOHNSON, J.; LEE, E.; MORGAN, H.; REDDING, B.; ROSANOVA, T.; SODERBLOM, L.; SUCHARSKI, R.; SUCHARSKI, T.; THOMPSON, K.; TORSON, J.; WEARD, W.; DORRER, E.; SMITH, P.; BRITT, D.; PATHFINDER SCIENCE TEAM  
Mapping the Sagan Memorial station site with the IMP camera
- PS028 MADSEN, M.B.; HVIID, S.F.; GUNNLAUGSSON, H.P.; KNUDSEN, J.M.; GOETZ, W.; DINESEN, A.R.; MOGENSEN, C.T.; PEDERSEN, C.T.; HARGRAVES, R.B.  
The magnetic properties instruments on Mars Pathfinder. Possible use in future missions
- PS029 REID, R.J.; SMITH, P.H.; THOMAS, N.; DUMMEL, A.  
IMP image calibration
- PS030 SABLONY, R.M.; MARKIEWICZ, W.J.; THOMAS, N.; KELLER, H.U.  
Reflection functions of Martian soils near the Carl-Sagan-Memorial-Station
- PS031 SODERBLOM, L.; ANDERSON, J.; BARRETT, J.; BECKER, K.; BECKER, T.; BENNETT, A.; BLUE, J.; COOK, D.; ELIASON, E.; GADDIS, L.; GARCIA, P.; GORDON, M.; HARE, T.; HOWINGTON-KRAUS, A.; ISBELL, C.; JOHNSON, J.; KIRK, R.; LEE, E.; MORGAN, H.; REDDING, B.; ROSANOVA, T.; SUCHARSKI, R.; SUCHARSKI, T.; THOMPSON, K.; TORSON, J.; WARD, W.; SMITH, P.; BRITT, D.; PATHFINDER SCIENCE TEAM  
The Mars Pathfinder super pan: USGS analysis and processing
- PS032 SOHL, F.; SPOHN, T.  
The sulfur content of the Martian core revisited: conclusions from Mars Pathfinder tracking
- PS033 WUTTKE, M.W.; THMOAS, N.; KELLER, H.U.; SMITH, P.H.; STOKER, C.; BLACKMON, T.  
Monte Carlo modelling of the diffuse flux near rocks

## PS13 Mars Pathfinder Mission: Update II

Convener: Keller, H.U.

Co-Convener(s): Golombek, M.P.; Wänke, H.

Wednesday, 22 April 1998

Lecture Room: IRIS

Chairperson: Jaumann, R.

- 09:00 **MARCHENKO, A.G.**; **BASILEVSKY, A.T.**;  
**NEUKUM, G.**; **HAUBER, E.**; **HOFFMANN, H.**;  
**COOK, A.C.**  
Geologic history of the mouth of Ares and Tiu  
Valles, Mars
- 09:15 **GREELEY, R.**; **SULLIVAN, R.**; **KRAFT, M.**;  
**SMITH, P.**; **MALIN, M.**; **KUZMIN, R.**;  
**GOLOMBEK, M.P.**; **HERKENHOFF, K.**  
Mars Pathfinder landing site: wind-related features
- 09:30 **GOLOMBEK, M.P.**; **HALDEMANN, A.F.C.**;  
**MOORE, H.J.**; **PARKER, T.J.**; **SCHOFIELD, J.T.**  
Assessment of Mars Pathfinder landing site predic-  
tions
- 09:45 **HALDEMANN, A.F.C.**; **JURGENS, R.F.**;  
**GOLOMBEK, M.P.**; **SLADE, M.A.**; **MOORE, H.**;  
**BLACKMON, T.**  
Mars Pathfinder landing site radar properties
- 10:00 **HAUBER, E.**; **JAUMANN, R.**; **MOSANGINI, C.**;  
**RUSS, N.**; **MATZ, K.-D.**; **TRAUTHAN, F.**  
The rock population at the Pathfinder landing site
- 10:15 **HALDEMANN, A.F.C.**; **ANDERSON, R.C.**;  
**BRIDGES, N.T.**; **HAUBER, E.**; **JAUMANN, R.**;  
**GOLOMBEK, M.P.**  
Rock statistics at the Mars Pathfinder landing site
- 10:30 BREAK
- Chairperson: Knudsen, J.M.
- 11:00 **BASILEVSKY, A.T.**; **MARKIEWICZ, W.J.**;  
**KELLER, H.U.**  
Morphological characteristics of several rocks within  
and near the rock garden: Pathfinder landing site,  
Mars

- 11:15 **ARNOLD, G.**; **DUMMEL, A.**; **LAMPEN, P.**;  
**TRAUTHAN, F.**; **SMITH, P.**; **BRITT, D.**; **JOHN-  
SON, J.R.**  
Laboratory spectrophotometric measurements of  
Mars analog materials and implications for the data  
evaluation of the imager for Mars Pathfinder (IMP)
- 11:30 **MARKIEWICZ, W.J.**; **THOMAS, N.**; **KELLER,  
H.U.**; **SMITH, P.**  
The colour of the Martian sky and its influence on  
the illumination of the Martian surface
- 11:45 **HVIID, S.F.**; **MADSEN, M.B.**; **GUNNLAUGSSON,  
H.P.**; **KNUDSEN, J.M.**; **GOETZ, W.**; **DINESEN,  
A.R.**; **MOGENSEN, C.T.**; **PEDERSEN, C.T.**;  
**HARGRAVES, R.B.**  
The magnetic properties of the Martian dust as  
studied on the Mars Pathfinder lander
- 12:00 LUNCH
- 12:00 Business Meetings
- Chairperson: Wänke, H.
- 14:00 **DREIBUS, G.**; **WÄNKE, H.**  
Does the Pathfinder value for the moment of inertia  
factor imply a non-chondritic Fe/Si ratio of Mars?
- 14:15 **ZHARKOV, V.N.**; **GUDKOVA, T.V.**  
Internal structure of Mars and Fe/Si ratio
- 14:30 **DUXBURY, T.C.**  
Precision cartographic map of the Pathfinder landing  
site
- 14:45 **OBERST, J.**; **ZEITLER, W.**; **JAUMANN, R.**  
Pathfinder landing site coordinates: the perspective  
from the inertial and the global cartographic system
- 15:00 **GIESE, B.**; **OBERST, J.**; **TRAUTHAN, F.**;  
**JAUMANN, R.**  
Photogrammetric analysis of far-field IMP images
- 15:15 **DORRER, E.**; **KIRK, R.**; **PEIPE, J.**  
Rigorous least squares adjustment of imager for  
Mars Pathfinder panoramic stereobundle block
- 15:30 Concluding Remarks
- 16:00 END OF SESSION



## 1999 General Assembly Den Haag, 19 - 23 April

Attend the open EGS Section/TWG Meetings on Wednesday, 22  
April, 12.00-14.00, and make your suggestions to the scientific  
programme. Further information on the EGS Web Site at  
<http://www.copernicus.org/EGS/EGS.html>.

PS

# Nonlinear Processes in Geophysics

## NP1 Scaling, multifractals and nonlinear variability in geophysics

### .1 Scaling, multifractals and nonlinearity in Solid Earth (co-sponsored by SE)

Convener: Schmittbuhl, J.

Co-Convener(s): Bak, P.; Turcotte, D.L.

Monday, 20 April 1998

Lecture Room: M9

Chairperson: Turcotte, D.L.

- 09:00 PECKNOLD, S.; LOVEJOY, S.; SCHERTZER, D.  
The magnetic field, scaling stratification and the magnetization sphere-scale
- 09:15 HIDE, R.  
Nonlinear quenching of current fluctuations in a self-exciting homopolar dynamo
- 09:30 MARSAN, D.; BEAN, C.; STEACY, S.; MCCLOSKEY, J.  
Short time scale seismic response for mining induced activity and generalised Omori's law \*
- 09:45 BRITO, V.P.; GOMES, M.A.F.; SOUZA, F.A.O.  
Behaviour of the diversity of fragments in plate breaking
- 10:00 SCHMITTBUHL, J.; LOPEZ, J.  
Anomalous scaling of fracture surfaces
- 10:15 SAGAR, P.; PECKNOLD, S.; LOVEJOY, S.; SCHERTZER, D.  
Multifractal topography and its bi-directional reflection field
- 10:30 BREAK

Chairperson: Schmittbuhl, J.

- 11:00 CATANI, F.; VANNUCCHI, P.  
A fractal approach to the structural analysis of melanges
- 11:15 VENEZIANO, D.; NIEMANN, J.D.; BRAS, R.L.  
A characterization of nonstationary multifractal processes
- 11:30 SMITH, L.A.; ALLEN, M.  
Heteroscedasticity, hurst, and surrogate data: persistence without predictability
- 11:45 GOLITSYN, G.S.  
Principle of fastest response in geophysics, hydrodynamics, etc.
- 12:00 GOMEZ, J.B.; PACHECO, A.F.  
Size-frequency distribution of earthquakes in hierarchically organized load-transfer models
- 12:15 HÄHNER, P.; DROSSINOS, Y.  
A creep-slip model of earthquake faults: analytical and numerical results
- 12:30 TURCOTTE, D.L.; MALAMUD, B.D.; MOREIN, G.  
Log periodicity in the forest-fire model
- 12:45 PELLETIER, J.D.  
A fractal pipe model for volcanism
- 13:00 END OF SUB-SESSION
- 17:00 Opening
- 19:30 Reception

## NP1 Scaling, multifractals and nonlinear variability in geophysics

### .1 Scaling, multifractals and nonlinearity in Solid Earth (co-sponsored by SE) - Poster Session

Convener: Schmittbuhl, J.

Co-Convener(s): Bak, P.; Turcotte, D.L.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - NP

Chairperson: Schmittbuhl, J.

- NP001 VALLIANATOS, F.  
A scaling law between an electric preseismic anomaly and the magnitude of the associated earthquake
- NP002 CUOMO, V.; LAPENNA, V.; PISCITELLI, S.; TELESKA, L.; MACCIATO, M.; SERIO, C.  
Detecting scaling laws and non-linear dynamics in geoelectrical signals: implications with earthquake prediction
- NP003 GOLTZ, C.  
Determinism and precursors in earthquake intervals
- NP004 KUZNETSOV, V.V.  
Fractal character of the Earth's evolution
- NP005 KUZNETSOV, V.V.  
The self-organizing criticality as the reason of the geomagnetic field reversal
- NP006 BOFFA, J.M.; ALLAIN, C.; HULIN, J.P.  
Experimental analysis of fracture rugosity in granular and compact rocks

## NP1 Scaling, multifractals and nonlinear variability in geophysics

### .2 Scaling, multifractals and nonlinearity in hydrology (co-sponsored by HS)

Convener: Onof, C.

Co-Convener(s): Olsson, J.; Veneziano, D.

Monday, 20 April 1998

Lecture Room: M9

Chairperson: Onof, C.

- 14:00 RODRIGUEZ-ITURBE, I.; MARANI, M.; D'ODORICO, P.; RINALDO, A.  
On space-time scaling of cumulated rainfall fields
- 14:15 MARSAN, D.; SCHERTZER, D.; LOVEJOY, S.  
Empirical relation between fractal dimension of support and average activity for space-time rain distributions; comparison with a space-time multifractal model
- 14:30 DWYER, I.; LAMMERING, B.  
Relationship between multifractal analysis of rainfall time series and spatial rainfall data (Poster)
- 14:35 SCHMITT, F.  
Multifractal analysis of daily rainfall data
- 14:50 PANDEY, G.; LOVEJOY, S.; SCHERTZER, D.  
Multifractal analysis and extremes of daily river flow series for basins five to two million square kilometers
- 15:05 VENEZIANO, D.; NIEMANN, J.D.; BRAS, R.L.  
Self-similarity and multifractality of river profiles

- 15:20 **MOUSSA, R.; TOURNOUD, M.G.;**  
BOCQUILLON, C.  
Fractal analysis of the spatial distribution of source  
basins within the catchment
- 15:35 **BAKUCZ, P.**  
Electrical analogy of fractal hydrodynamical disper-  
sion (Poster)
- 15:40 **JAEKEL, U.; SCHWARZE, H.; VEREECKEN, H.**  
Scaling behaviour of macrodispersion in a bromide  
tracer experiment on the field scale
- 15:55 **GLOBUS, A.M.**  
On fractal character of soil solid phase surface as  
revealed by retentivity function (Poster)
- 16:00 **KONTUR, I.; BAKUCZ, P.**  
Modelling of contaminant transport with help of  
stochastic particle simulation (Poster)
- 16:05 **DESAULNIERS-SOUCY, N.; LOVEJOY, S.;**  
SCHERTZER, D.  
Multiscaling properties of the three dimensional  
spatial distributions of rain and snow in 10 m<sup>3</sup>  
(Poster)
- 16:10 **DWYER, I.; LAMMERING, B.**  
Using multifractal description of spatial rainfall in  
GCMs (Poster)
- 16:15 **AUBERT, D.; BEAUVAIS, A.; DUBOIS, J.;**  
ORANGE, D.  
Nonlinear effects on the temporal evolution of  
fluvial discharge: case of the Oubangui river (Poster)
- 16:20 **AVERBACH, V.S.; VLASOV, S.N.; ZASLAVSKY,**  
Y.M.  
The motion of the liquid droplet pinched into porous  
medium capillary channel due to vibration
- 16:25 **END OF SUB-SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

**NP1 Scaling, multifractals and nonlinear  
variability in geophysics**  
**.2 Scaling, multifractals and nonlinearity  
in hydrology (co-sponsored by HS) -  
Poster Session**

Convener: Onof, C.

Co-Convener(s): Olsson, J.; Veneziano, D.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - NP

Chairperson: Onof, C.

- NP014 **DWYER, I.; LAMMERING, B.**  
Relationship between multifractal analysis of  
rainfall time series and spatial rainfall data
- NP007 **BAKUCZ, P.**  
Electrical analogy of fractal hydrodynamical  
dispersion
- NP008 **GLOBUS, A.M.**  
On fractal character of soil solid phase surface as  
revealed by retentivity function
- NP009 **KONTUR, I.; BAKUCZ, P.**  
Modelling of contaminant transport with help of  
stochastic particle simulation
- NP010 **DESAULNIERS-SOUCY, N.; LOVEJOY, S.;**  
SCHERTZER, D.  
Multiscaling properties of the three dimensional  
spatial distributions of rain and snow in 10 m<sup>3</sup>

- NP011 **DWYER, I.; LAMMERING, B.**  
Using multifractal description of spatial rainfall  
in GCMs
- NP012 **AUBERT, D.; BEAUVAIS, A.; DUBOIS, J.;**  
ORANGE, D.  
Nonlinear effects on the temporal evolution of  
fluvial discharge: case of the Oubangui river
- NP013 **AVERBACH, V.S.; VLASOV, S.N.;**  
ZASLAVSKY, Y.M.  
The motion of the liquid droplet pinched into  
porous medium capillary channel due to vibration

**NP1 Scaling, multifractals and nonlinear  
variability in geophysics**  
**.3 Scaling, multifractals and nonlinearity  
in oceans & atmosphere (co-sponsored  
by OA)**

Convener: Schmitt, F.

Co-Convener(s): Cahalan, R.F.; Yanovsky, V.V.

Tuesday, 21 April 1998

Lecture Room: M9

Chairperson: Cahalan, R.F.

Nonlinear dynamics and multifractals

- 09:00 **PELLETIER, J.D.**  
Scaling of the natural variability of the atmosphere-  
ocean system
- 09:15 **FOURNIER, A.**  
Description of nonlinear triad interaction in fluid  
dynamics using trilinear coordinates
- 09:30 **SCHERTZER, D.; LARCHEVEQUE, M.;**  
LOVEJOY, S.  
Beyond the multifractal phenomenology of geophys-  
ics: dynamics and (revisited) renormalization
- 09:45 **KAZANTSEV, E.**  
Unstable periodic orbits and attractors of non-linear  
dynamical models
- 10:00 **ROKITANSKY, I.I.**  
Quasi-spontaneous variations of physical parameters

Oceanic variability and atmospheric turbulence

- 10:15 **SEURONT, L.; SCHMITT, F.; GENTILHOMME,**  
V.; LAGADEUC, Y.; SCHERTZER, D.  
Tidally induced heterogeneity in different hydrody-  
namic conditions: a multifractal analysis
- 10:30 **MARGUERIT, C.; SCHERTZER, D.; LOVEJOY,**  
S.  
Quantification of multifractal diffusion
- 10:45 **BREAK**

Chairperson: Lovejoy, S.M.

- 11:15 **SCOTTI, A.; MENEVEAU, C.**  
Turbulence parameterization using fractal synthetic  
fields (Solicited Paper)
- 11:45 **CHILLA, F.; PINTON, J.-F.**  
Turbulence measurements in the neighbourhood of a  
strong vortex
- 12:00 **EROKHIN, N.S.; MOISEEV, S.S.; LAZAREV,**  
A.A.; MITYAGINA, M.I.; PETRENKO, B.Z.  
Analysis of radiobrightness temperature field over  
tropical cyclone

NP

- 12:15 SCHMITT, F.  
A scale-by-scale validation of continuous multifractal models in turbulence
- 12:30 ODIER, P.; PINTON, J.-F.; FAUVE, S.  
Experimental MHD study of a liquid gallium flow at moderate magnetic Reynolds numbers
- 12:45 BENVENUTO, F.; MARANI, A.; MOROVIC, M.  
Scaling properties of the surface chlorophyll field in the northern Adriatic (Poster)
- 12:50 LUNCH

Chairperson: Schmitt, F.

#### Clouds and radiative transfer

- 14:00 CAHALAN, R.F.; MORCRETTE, J.J.  
Cloud scaling properties and cloud parameterization in the ECMWF forecast model
- 14:15 ARNEODO, A.  
A thermodynamics of fractals based on wavelet analysis: applications to rough surfaces and satellite images of fractal clouds
- 14:30 WATSON, B.; LOVEJOY, S.; SCHERTZER, D.  
Nondiffusive scattering statistics in universal multifractal clouds
- 14:45 DAVIS, A.; MARSHAK, A.; CAHALAN, R.F.; WISCOMBE, W.J.  
Nonlinearities of 3D radiative transfer, illustrated with boundary-layer clouds (Solicited Paper)
- 15:15 PEJOUX, R.; SZCZAP, F.; ISAKA, H.  
Generation of heterogeneous clouds based on morphological analysis and their effective radiative properties
- 15:30 IVANOVA, K.  
Multifractal and chaotic analysis of atmospheric time series
- 15:45 ROUX, S.; CAHALAN, R.F.; DAVIS, A.; ARNEODO, A.; MUZY, J.-F.; BACRY, E.  
Multifractal analysis of 1D and 2D cloud data, the "wavelet transform modulus maxima" approach
- 16:00 GUILLEMET, B.; ISAKA, H.; SZCZAP, F.  
Spectral analysis of radiative flux of heterogeneous clouds
- 16:15 STANWAY, D.; LOVEJOY, S.; SCHERTZER, D.  
Multifractal analysis of clouds from 5000 km to 50 cm and the demise of the mesoscale gap (Solicited Paper)
- 16:45 VESPOLI DE CARVALHO, L.M.; SILVA DIAS, M.A.F.; TOLEDO MACHADO, L.A.  
A method to identify morphology and spatial scale of cloud systems using fractal box-counting dimensions (Poster)

Stand-by paper:

RODICHEV, E.

A numerical investigation of some scaling properties of atmospheric turbulence

16:50 Summary

17:00 END OF SUB-SESSION

### **NP1 Scaling, multifractals and nonlinear variability in geophysics**

#### **.3 Scaling, multifractals and nonlinearity in oceans & atmosphere (co-sponsored by OA) - Poster Session**

Convener: Schmitt, F.

Co-Convener(s): Cahalan, R.F.; Yanovsky, V.V.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:30 - 19:00

Poster Area: AGORA 3 - NP

- NP015 FALEIRO, E.; GOMEZ, J.M.G.  
Universal multifractal analysis of ground level particle distributions from extended air showers
- NP016 BENVENUTO, F.; MARANI, A.; MOROVIC, M.  
Scaling properties of the surface chlorophyll field in the northern Adriatic
- NP017 VESPOLI DE CARVALHO, L.M.; SILVA DIAS, M.A.F.; TOLEDO MACHADO, L.A.  
A method to identify morphology and spatial scale of cloud systems using fractal box-counting dimensions
- NP019 MAREEV, E.A.; SOROKIN, A.E.; TRAKHTENGERTS, V.YU.  
One possible mechanism of electric field scaling in a thunderstorm cell
- NP020 BOROVNIKOV, V.A.; BULATOV, V.V.; MOROZOV, E.G.  
Tidal internal waves in the tropical Atlantic: nonspectral and spectral approaches

### **NP1 Scaling, multifractals and nonlinear variability in geophysics**

#### **.4 Scaling, multifractals and natural/man-made hazards (co-sponsored by NH) - Poster Session**

Convener: Salvadori, G.S.

Co-Convener(s): Malamud, B.D.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: AGORA 3 - NP

- NP022 DEIDDA, R.; BENZI, R.; SICCARDI, F.  
A model for numerical simulation of the statistical properties of precipitation fields
- NP022A KOROBEINIKOV, V.P.  
A scale of cosmic-terrestrial catastrophes

---

### **Attend the Business Meeting of your Section**

on Wednesday, 22 April, 12.00-14.00, Lecture Room M3

---

**NP1 Scaling, multifractals and nonlinear variability in geophysics**  
**.4 Scaling, multifractals and natural/man-made hazards (co-sponsored by NH)**

Convener: Salvadori, G.S.  
 Co-Convener(s): Malamud, B.D.  
**Friday, 24 April 1998**  
 Lecture Room: M2  
 Chairperson: Salvadori, G.S.

- 08:45 SORNETTE, D.  
 Prediction of catastrophes: a new approach (Solicited Paper)  
 09:15 PELLETIER, J.D.  
 Analysis and modelling of the frequency-size distribution of landslides  
 09:35 MALAMUD, B.D.; MOREIN, G.; TURCOTTE, D.L.  
 Why do forest fires obey power-law (fractal) frequency-area statistics?  
 09:55 CHIGIRINSKAYA, Y.; SCHERTZER, D.; LOVEJOY, S.  
 Multifractality of Chernobyl fall-out and the estimation of doses accumulated by individuals  
 10:15 RIZZO, V.; FRAGALE, F.; TULELLI, A.  
 Methodology to locate geological risk for assurance: an application on the S. Eufemia area (central Calabria, Italy)  
 10:35 BREAK

Chairperson: Malamud, B.D.

- 11:00 DEIDDA, R.; SICCARDI, F.; BENZI, R.  
 Multifractal analysis of rainfall fields in time and space  
 11:20 DE MICHELE, C.; KOTTEGODA, N.T.; ROSSO, R.  
 Self-affinity and dynamic scaling of extreme storm precipitation  
 11:40 BARTON, C.C.  
 Scaling laws for tropical storms and hurricanes: a basis for predicting probability of landfall windspeed  
 12:00 TEBBENS, S.F.; BARTON, C.C.  
 A fractal scaling law for tsunami runup  
 12:20 MONTALDO, N.; ROSSO, R.  
 Scale invariance of storm surface runoff (Solicited Paper)  
 12:50 LUNCH

Chairperson: Salvadori, G.S.

- 14:00 RUNDLE, J.B.; PRESTON, E.; MCGINNIS, S.; KLEIN, W.  
 Growth and arrest of earthquakes (Solicited Paper)  
 14:30 MAIN, I.  
 Apparent (?) breaks in frequency-moment scaling  
 14:50 KOSSOBOKOV, V.G.; TURCOTTE, D.L.; MALAMUD, B.D.  
 A systematic global assessment of the seismic hazard  
 15:10 RUNDLE, J.B.; KLEIN, W.  
 Dynamics triggering of slip in earthquakes

- 15:30 SCHÖNENBERG, F.  
 Earthquakes in southern France - risk assessment from a reinsurer's point of view  
 15:50 Concluding Remarks and Discussion  
 16:30 END OF SESSION

**NP2 Predictability & time series analysis**  
**.1 Quantifying predictability - Poster Session**

Convener: Toth, Z.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
 Poster Area: AGORA 3 - NP  
 Chairperson: Aberson, S.D.

- NP023 GUTIERREZ, C.; ORTIZBEVIA, M.J.; RUIZDEELVIRA, A.  
 Global climate signals and the Spanish rainfall  
 NP024 GUTIERREZCEBALLOS, C.; ORTIZBEVIA, M.J.  
 Predictability of the North Atlantic anomalous circulation  
 NP025 ABERSON, S.D.; TULEYA, R.E.; BENDER, M.A.  
 Ensemble forecasting of hurricane tracks and intensity

**NP2 Predictability & time series analysis**  
**.1 Quantifying predictability**

Convener: Toth, Z.  
**Thursday, 23 April 1998**  
 Lecture Room: M2  
 Chairperson: Talagrand, O.

- 08:30 VANNITSEM, S.  
 Predictability, Lyapunov vectors and weather regimes in a T21L3 quasi-geostrophic model (Solicited Paper)  
 09:00 BONTEMPS, B.; KÄLLEN, E.  
 On the relationship between singular vectors and breeding modes, a comparative study with a simple model  
 09:15 BUIZZA, R.; PALMER, T.N.  
 Impact of ensemble size on ensemble prediction  
 09:30 IVANOV, L.M.; MARGOLINA, T.M.  
 On calculation of the probability distribution functions for statistical ensembles with the large numbers of freedom degrees  
 09:45 D'ANDREA, F.; VAUTARD, R.  
 Flow dependent parametrization of tendency error on a simplified model  
 10:00 TALAGRAND, O.; VAUTARD, R.; STRAUSS, B.  
 Evaluation of probabilistic prediction systems  
 10:15 FRISON, T.W.  
 Quantifying predictability with Lyapunov exponents  
 10:30 BREAK

NP

Chairperson: Mullen, S.L.

- 11:00 **DROEGEMEIER, K.K.**; XUE, M.; ZONG, J.; HOU, D.; WANG, D.; PARK, S.K.; CARR, F.H.  
The practical predictability of deep convective storms: use of real time operational tests and detailed case studies to assess the role of scale interaction in forecast uncertainty
- 11:15 **LAHOZ, W.A.**  
Stratospheric predictability in the UKMO Unified Model
- 11:30 **IDE, K.**; GHIL, M.  
Hybrid dynamic-statistical forecasting and forecast skill
- 11:45 **GHIL, M.**; IDE, K.  
Low-frequency variability of the atmosphere and long-range forecasting (Solicited Paper)
- 12:15 **PERESAN, A.**; ROTWAIN, I.M.; PANZA, G.F.  
Evaluation of the stability of algorithm CN with respect to random errors in magnitude: central Italy
- 12:30 **MULLEN, S.L.**; WANDISHIN, M.; BROOKS, H.E.; STENSRUD, D.J.; DOWELL III, C.A.  
Quantitative precipitation forecasting: predictability limits and the use of ensemble forecasts
- 12:45 **ABERSON, S.D.**  
Targeting observations to improve tropical cyclone track forecasts
- 13:00 **END OF SUB-SESSION**

## **NP2 Predictability & time series analysis .2 Execution and analysis of geophysical laboratory experiments**

Convener: Malinowski, S.P.  
Co-Convener(s): Fröh, W.-G.  
**Monday, 20 April 1998**  
Lecture Room: IRIS  
Chairperson: N.N.

- 14:00 **SMITH, L.A.**  
Dynamic state-space reconstructions: a case study with thermally driven, rotating fluid annulus (Solicited Paper)
- 14:30 **STEPHEN, A.V.**; MOROZ, I.M.; READ, P.L.  
POD analysis of baroclinic wave flows in the thermal rotating annulus experiment
- 14:45 **LOVEGROVE, A.F.**; **READ, P.L.**; **RICHARDS, C.J.**  
Inertia-gravity waves in a baroclinically unstable rotating fluid
- 15:00 **READ, P.L.**; **FRÜH, W.-G.**  
Flow-field and point velocity measurements in a barotropically unstable shear layer
- 15:15 **MEINCKE, O.**; **EGBERS, C.**  
Routes into chaos in rotating fluids
- 15:30 **SITTE, B.**; **EGBERS, C.**  
LDV-measurements on baroclinic waves
- 15:45 **BANAT, P.**; **MALINOWSKI, S.P.**  
Properties of the turbulent cloud-clear air interface observed in the laboratory experiment
- 16:00 **MALINOWSKI, S.P.**; **JACZEWSKI, A.**  
Investigation of the droplet concentration at the cloud-clear air interface
- 16:15 **END OF SUB-SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

## **NP2 Predictability & time series analysis .2 Execution and analysis of geophysical laboratory experiments - Poster Session**

Convener: Malinowski, S.P.  
Co-Convener(s): Fröh, W.-G.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
Poster Area: AGORA 3 - NP

- NP029 **BASTIN, M.E.**  
The effect of sloping boundaries on baroclinic instability in two related internally heated, rotating fluid systems
- NP030 **SHEARER, E.**; **FRÜH, W.-G.**  
Kelvin-Helmholtz instability in a continuously forced shear flow

## **NP2 Predictability & time series analysis .3 Nonlinear time series analysis**

Convener: Kurths, J.  
Co-Convener(s): Yiou, P.  
**Wednesday, 22 April 1998**  
Lecture Room: M2  
Chairperson: Kurths, J.

- 08:30 **PROVENZALE, A.**  
Potentials and limits of nonlinear time series analysis for the understanding of geophysical turbulence (Solicited Paper)
- 09:00 **KWASNIOK, F.**  
Deriving stochastic dynamical models from noisy time series
- 09:15 **DETHLOFF, K.**; **WEISHEIMER, A.**; **HANDORF, D.**; **RINKE, A.**; **KURGANSKY, M.V.**; **PETOUKHOV, V.**; **JANSEN, W.**  
Decadal climate variability in conceptual models of the atmosphere and the atmosphere-ocean system
- 09:30 **STONE, L.**; **SAPARIN, P.I.**; **HUPPERT, A.**; **PRICE, C.**  
El Nino chaos: pronounced noise induced effects and stochastic resonance in a model of the ENSO cycle
- 09:45 **GHIL, M.**  
The SSA-MTM toolkit: applications to analysis and prediction of time series (Solicited Paper)
- 10:15 **MCSHARRY, P.**; **SMITH, L.A.**  
On embedding realistic data
- 10:30 **TIMMER, J.**; **WARDINSKI, I.**; **SCHWARZ, U.**; **HASINGER, G.**; **KURTHS, J.**  
Linear and non-linear time series analysis of CYG X-1
- 10:45 **FOURNIER, A.**  
Resolution of a nonlinear function of a signal into smooth and singular or intermittent parts, using wavelet paraproduct
- 11:00 **KIRIAN, D.G.**  
Research of quasiperiodic processes by a resonance method
- 11:15 **FRISON, T.W.**  
Nonlinear time series analysis in phase space
- 11:30 **WOLF, F.**; **LANGE, H.**  
Complexity analysis of long-term time series from the Hubbard Brook ecosystem study
- 11:45 **LUNCH/12:00 Business Meetings**

Chairperson: Yiou, P.

- 14:00 SMITH, L.A.  
The irrelevance of chaos in forecasting and "tiny" data sets (Solicited Paper)
- 14:30 SMITH, L.A.; ZIEHMANN, C.; KURTHS, J.  
Chaos and the (broken) bootstrap
- 14:45 TSONIS, A.A.; ROEBBER, P.J.  
Using nonlinear approaches to predict predictability and transitions in the atmospheric general circulation
- 15:00 MALAMUD, B.D.; TURCOTTE, D.L.  
Analysis of self-affine log-normal time series
- 15:15 DAVIS, A.; MARSHAK, A.; WISCOMBE, W.J.; CAHALAN, R.F.  
A simple criterion for detecting potentially spurious multifractality in limited datasets
- 15:30 FRAEDRICH, K.  
Low frequency variability in simple GCMs (Solicited Paper)
- 16:00 DUDOK DE WIT, T.  
Efficient coherent noise rejection by generalized singular value decomposition
- 16:15 IVANOV, L.M.; MARGOLINA, T.M.  
Spatial reconstruction of scalar fields for large ratios of the noise to reconstructing signal and unknown noise
- 16:30 TRAUTH, M.H.; SCHWARZ, U.; KURTHS, J.; HASELTON, K.; STRECKER, M.  
Varved pleistocene lake sediments in NW Argentina as archives of paleo-climate dynamics: comparison of past and modern rainfall variations
- 16:45 MACEK, W.M.  
Testing for an attractor in the solar wind
- 17:00 PETSCHER-HELD, G.  
Risk analysis of global change
- 17:15 END OF SUB-SESSION

## NP2 Predictability & time series analysis

### .3 Nonlinear time series analysis - Poster Session

Convener: Kurths, J.

Co-Convener(s): Yiou, P.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:30 - 19:00

Poster Area: AGORA 3 - NP

- NP031 URQUIZU, M.; CORREIG, A.M.  
Analysis of seismic dynamical systems
- NP032 BUENESTADO, P.; RODRIGUEZ, R.; SOLER, M.R.  
Objective spectral method applied to meteorological series
- NP033 PALUS, M.; NOVOTNA, D.  
Enhanced Monte Carlo SSA for detection of modes with nontrivial dynamics embedded in colored noise
- NP034 BALLESTER, J.L.  
Is there memory in solar activity?
- NP035 MACHARASHVILI, T.; CHELIDZE, T.; JAVAKHISHVILI, Z.  
Dynamics of temporal distribution of Caucasian earthquakes

- NP036 NAZAREVYCH, A.V.

Spectral-temporal structure of nonlinear-parametric effects in rocks as an indicator of a geodynamic mode

- NP037 IVANOV, S.S.

Statistical properties of dynamic systems: dependence on scales of resolution

## NP3 Transport and mixing in geophysical flows

### .1 Transport and mixing in stably stratified fluid

Convener: Staquet, C.

Tuesday, 21 April 1998

Lecture Room: M3

Chairperson: N.N.

#### Mixing and transport by internal gravity waves

- 10:00 KANEDA, Y.; ISHIDA, T.  
Suppression of vertical diffusion in stably stratified turbulence
- 10:15 GLAZMAN, R.E.; WEICHMAN, P.B.  
Oceanographic implications of wave-induced turbulent diffusion
- 10:30 BREAK
- Chairperson: Rees, J.M.
- 11:00 BOURUET-AUBERTOT, P.; KOUDELLA, C.; STAQUET, C.; WINTERS, K.B.  
Particle dispersion and mixing by breaking internal gravity waves
- 11:15 DINTRANS, B.; RIEUTORD, M.; VALDETTARO, L.  
Gravito-inertial waves in a rotating stratified spherical shell
- 11:30 LELONG, M.-P.; RILEY, J.J.; DUNKERTON, T.J.  
Transport associated with internal wave reflection at a sloping boundary
- 11:45 MICHALLET, H.; IVEY, G.N.  
Experimental study of internal solitary waves breaking on a slope

#### Mixing in stably stratified turbulence

- 12:00 VAN ATTA, C.W.; KELLER, K.  
Non-equilibrium osborn-cox model for ocean and atmosphere microstructure flux estimates (Solicited Paper)
- 12:30 BALMFORTH, N.J.; LLEWELLYN SMITH, S.G.; YOUNG, W.R.  
Dynamics of interfaces and layers in a stratified turbulent fluid
- 12:45 REDONDO, J.M.  
Layering in strongly stratified flows \*
- 13:00 LUNCH
- Chairperson: Lelong, M.-P.
- 14:00 STIANSEN, J.E.; SVENDSEN, H.; FINNE, K.; TVERBERG, V.  
Shear generated mixing processes in Arctic and sub-Arctic fjords

NP



- 14:15 **CAULFIELD, C.P.; PELTIER, W.R.**  
The life cycle of a stratified shear layer
- 14:30 **STAQUET, C.; KOUDELLA, C.; WINTERS, K.B.**  
Mixing in a stably stratified shear layer

Internal gravity waves in the atmosphere: observations and models

- 14:45 **ETLING, D.**  
Dispersion in the stably stratified atmospheric boundary layer (Solicited Paper)
- 15:15 **AFANASYEV, YA.D.; PELTIER, W.R.**  
Internal gravity wave breaking in the middle atmosphere: two- and three-dimensional numerical simulations
- 15:30 **EIFF, O.; BONNETON, P.**  
Three-dimensional structure of breaking mountain waves
- 15:45 **GHEUSI, F.; STEIN, J.**  
A numerical study of 3D gravity wave breaking over a 2D orography
- 16:00 **VALENTE, M.A.**  
Effects of directional shear wind on gravity wave drag
- 16:15 **REES, J.M.; PRICE, J.C.W.; ANDERSON, P.S.; KING, J.C.**  
Climatology of internal gravity waves in a stably stratified atmospheric boundary layer
- 16:30 **CAILLOL, P.; ZAITLIN, V.**  
On the stationary spectra of weakly nonlinear internal gravity waves in 2 and 3 dimensions
- 16:45 **ALISSE, J.-R.; SIDI, C.**  
Nongaussian probability density functions of small-scale fluctuations in the stably stratified atmosphere
- 17:00 **END OF SUB-SESSION**

**NP3 Transport and mixing in geophysical flows**

**.1 Transport and mixing in stably stratified fluid - Poster Session**

Convener: Staquet, C.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:30 - 19:00**  
Poster Area: AGORA 3 - NP

- NP039 **ALESHKOV, Y.Z.; BUKATOV, A.E.; BUKATOV, A.A.**  
Long internal waves of finite amplitude in the fluid with a density jump
- NP040 **HERTZOG, A.; SOUPRAYEN, C.; HAUCHECORNE, A.**  
Inertia-gravity waves in the lower stratosphere: observations and ray-tracing
- NP041 **BONNIER, M.; BONNETON, P.; EIFF, O.S.**  
Investigation of the vertical structure of the far-wake of a sphere in a stratified fluid
- NP042 **CHAUMAT, L.; BRENGUIER, J.-L.**  
Observations of turbulence and mixing in clouds at the centimeter scale
- NP043 **DOKUCHAEV, V.P.**  
Molecular diffusion of passive admixture in stratified flows
- NP044 **ZIMMERMAN, W.B.; RAMSAY, F.J.**  
Stability and rollover in double diffusive systems

- NP045 **BOUCHE, V.; SALUSTI, E.**  
Convective motion driven by localized sudden cooling of heating events on the surface of the sea

**NP3 Transport and mixing in geophysical flows**

**.2 Turbulence and mixing in geophysical flows, effects of stratification and rotation, convection, effect of coherent structures, Lagrangian chaos**

Convener: Redondo, J.M.  
**Wednesday, 22 April 1998**  
Lecture Room: M3  
Chairperson: Provenzale, A.

1. Body forces in geophysical flows

a. Effect of rotation

- 09:00 **FLOR, J.-B.; EAMES, I.**  
Fluid transport by coherent vortices
- 09:15 **AFANASYEV, YA.D.; PELTIER, W.R.**  
Three-dimensional instability of anticyclonic barotropic vortices in a rotating fluid: laboratory experiments
- 09:30 **GREENSLADE, M.D.; HAYNES, P.H.**  
Jets in fully developed beta-plane turbulence in a multi-layer model
- 09:45 **HARLANDER, U.**  
Nonlinear features of Rossby wave packet propagation on the  $\beta$ -plane
- 10:00 **COULLIETTE, C.; WIGGINS, S.; IDE, K.**  
A study of Lagrangian transport in a wind driven, 3-layer, eddy-resolving general circulation model using dynamical systems theory

b. Effect of rotation and stratification

- 10:15 **FINCHAM, A.M.**  
Vortex structures in stably stratified rotating fluids (Solicited Paper)
- 10:45 **LUNCH**
- 12:00 **Business Meetings**

Chairperson: Afanasyev, Y.D.

c. Entrainment and mixing models in geophysical flows

- 14:00 **PETERSEN, O.**  
Large eddy simulation of entrainment in penetrative convection with and without rotation (Solicited Paper)
- 14:30 **BROCCHINI, M.**  
Strong turbulence at an air-water interface
- 14:45 **MAHJOUB, O.B.; REDONDO, J.M.**  
Structure functions in geophysical flows

2. Transport and mixing in the ocean and the atmosphere

- 15:00 **VON HARDENBERG, J.; FRAEDRICH, K.; LUNKEIT, F.; PROVENZALE, A.**  
Transport during a storm life-cycle in a simplified GCM

- 15:15 **IDE, K.**; WIGGINS, S.; COULLIETTE, C.  
Mixing in the midlatitude's wind-driven oceanic circulation: dynamical processes and variability
- 15:30 **BURCHARD, H.**; DEMIROV, E.; EIFLER, W.; CASTELLARI, S.; PINARDI, N.  
Modelling convection in the Mediterranean Sea with different turbulence closure schemes
- 15:45 **TSITVERBLIT, N.**  
Double-component convection driven by the different boundary conditions
- 16:00 **BRACCO, A.**; PROVENZALE, A.  
Statistical properties of subsurface float trajectories in the Atlantic Ocean \*
- 16:15 **KAGAN, B.A.**; SCHRIMPF, W.; UTKIN, K.B.  
Parameterisation of the sediment stratification effect on flow dynamics
- 16:30 **END OF SUB-SESSION**

### **NP3 Transport and mixing in geophysical flows**

#### **.2 Turbulence and mixing in geophysical flows, effects of stratification and rotation, convection, effect of coherent structures, Lagrangian chaos - Poster Session**

Convener: Redondo, J.M.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Wednesday, 17:00 - 19:00  
Poster Area: AGORA 3 - NP  
Chairperson: Fincham, A.M.

- NP046 **SKIBA, Y.N.**  
On asymptotic behaviour of a forced viscous fluid
- NP047 **FRAUNIE, P.**  
Analysis of the vertical dispersion in a river plume discharging in a microtidal sea \*
- NP048 **LACASCE, J.H.**  
Projected displacement statistics in the ocean
- NP049 **LOPEZ, C.**; HERNANDEZ-GARCIA, E.  
Empirical orthogonal function analysis of altimetry data of the Algerian current: towards a low-dimensional dynamical system model
- NP050 **MEDINA, P.**; SANCHEZ, M.A.; REDONDO, J.M.  
Lift OFF of sediments in zero-mean flows \*
- NP051 **PETERSEN, O.**; BURCHARD, H.  
Parameterization of turbulence and entrainment in penetrative convection
- NP052 **REDONDO, J.M.**; RIDOU, M.  
Convective flows in thermally non steady enclosures. The effect of rotation \*
- NP053 **SALAS, J.**; GARCIA-LADONA, E.; FONT, J.  
Statistical analysis of the surface circulation in the Algerian current using Argos buoys
- NP054 **OSBALDESTIN, A.H.**; STIRLING, J.R.  
On the dynamics and patchiness of pollution in a turbulent estuarine flow

---

**Attend the Poster Session**

---

### **NP3 Transport and mixing in geophysical flows**

#### **.3 Dispersion in two-dimensional flows, mixing, anomalous diffusion, experiments, models and numerical simulations**

Convener: Tabeling, P.  
**Monday, 20 April 1998**  
Lecture Room: M3  
Chairperson: N.N.

- 09:00 **CARENA, E.**; PROVENZALE, A.; WEISS, J.B.  
Eulerian and Lagrangian statistics in point vortex systems (Solicited Paper)
- 09:30 **CARTWRIGHT, J.H.E.**; PIRO, O.  
Transport and mixing in 3D laminar flows (Solicited Paper)
- 10:00 Discussion
- 10:15 **BREAK**

Chairperson: N.N.

- 11:00 **LONGO, S.**; LAMBERTI, A.  
Lagrangian numerical model of a binary mixture and segregation processes
- 11:15 **PASCAL, B.**; MOREAU, R.  
An experiment on two-dimensional turbulence in a mixing layer
- 11:30 **HERBERT, V.**; LARCHEVEQUE, M.; STAQUET, C.  
Hyperviscous dynamics of two-dimensional turbulence
- 11:45 **BENE, J.**; LUSTFELD, H.  
Diffusion of tracer particles in 2 dimensional flows with large Reynolds numbers
- 12:00 **NICOLLEAU, F.**; VASSILICOS, J.C.  
Kinematic simulation for stratified flows
- 12:15 **FOURNIER, A.**  
Efficient representation of coherent structures by translation-invariant orthonormal wavelet analysis
- 12:30 **MCLAUGHLIN, R.M.**  
Anelastic mixing: transport by weakly compressible flow
- 12:45 **END OF SUB-SESSION**
- 17:00 Opening
- 19:30 Reception

### **NP3 Transport and mixing in geophysical flows**

#### **.3 Dispersion in two-dimensional flows, mixing, anomalous diffusion, experiments, models and numerical simulations - Poster Session**

Convener: Tabeling, P.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Tuesday, 17:00 - 19:00  
Poster Area: AGORA 3 - NP

- NP055 **BRACCO, A.**  
Transport and dispersion in the surface quasigeostrophic equations \*
- NP056 **CESARI, R.**; LORENZANI, S.; MAURIZI, A.; TAMPIERI, F.  
Passive tracer fluxes in complex turbulent flows

**NP**

- NP057 **CHO, J.Y.-K.**; INGERSOLL, A.P.  
The effects of Markovian random forcing and dissipation in 2-D turbulence
- NP058 **TAMPIERI, F.**; PARADISI, P.; ZAULI SAJANI, S.  
Computations of impurity trajectories in two-dimensional incompressible periodic flows
- NP059 **PALDOR, N.**; **DVORKIN, Y.**  
Lagrangian modelling of cross-equatorial airflow - stochastic resonance in a Hamiltonian system

**NP3 Transport and mixing in geophysical flows**  
**.4 Biological processes and mixing in the ocean (co-sponsored by OA)**

Convener: Richards, K.J.  
**Thursday, 23 April 1998**  
Lecture Room: M3  
Chairperson: Garcon, V.

- 08:30 **BRINDLEY, J.**  
Interplay of fluid dynamics & plankton population dynamics in the ocean (Solicited Paper)
- 09:00 **RICHARDS, K.J.**; SPALL, S.  
Eddy mixing and biological production
- 09:15 **MORENO, P.**; **HUOT, J.-P.**  
The influence of phytoplankton on the mixed layer and surface heat fluxes
- 09:30 **VICHI, M.**; PINARDI, N.; ZAVATARELLI, .; FRASCARI, F.; BERGAMINI, C.; MATTEUCCI, G.; MARCACCIO, M.  
A one-dimensional model study of the biogeochemical seasonal cycles in the Po prodelta area (northern Adriatic Sea)
- 09:45 **CORN, M.**; GUIEU, C.  
Relations between phytoplankton and trace metals
- 10:00 **DRANGE, H.**  
A model study of the effect of vertical mixing on the marine ecosystem (Solicited Paper)
- 10:30 **BREAK**

Chairperson: Drange, H.

- 11:00 **GARCON, V.**; OSCHLIES, A.; GUNSON, J.  
The impact of mesoscale eddies on primary production in the north Atlantic Ocean: a modelling approach (Solicited Paper)
- 11:30 **OSCHLIES, A.**; GARCON, V.  
Pathways of nutrient supply to the oligotrophic subtropical gyre: a model study
- 11:45 **GREGOIRE, M.**; BECKERS, J.M.; NIHOUL, J.  
Coupled hydrodynamic ecosystem model of the Black Sea at basin scale. First results of a high resolution 3D interdisciplinary model
- 12:00 **SCHARTAU, M.**; WILLEBRAND, J.  
Parameter optimization of a simple marine ecosystem model using the adjoint methods
- 12:15 **NAPOLITANO, E.**; OGUZ, T.; MALANOTTE-RIZZOLI, P.  
Modelling annual plankton dynamics in the Ionian Sea (eastern Mediterranean)

\* not included in the Book of Abstracts

- 12:30 **CRISPI, G.**; CRISE, A.; MOSETTI, R.; SOLIDORO, C.  
Effects of advection, mixing and sinking on spatial and temporal evolution of biochemical parameters in the Mediterranean Sea
- 12:45 **SMAOUI, H.**; **OUAHSINE, A.**; SENTCHEV, A.  
Numerical experiments for advection-diffusion schemes: application to larvae transport in the English Channel
- 13:00 **END OF SUB-SESSION**

**NP3 Transport and mixing in geophysical flows**  
**.4 Biological processes and mixing in the ocean (co-sponsored by OA) - Poster Session**

Convener: Richards, K.J.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: AGORA 3 - NP

- NP060 **KANOSHINA, I.**; LIPS, U.; KONONEN, K.  
The effect of hydrodynamics on the phytoplankton primary production and species composition at the entrance to the Gulf of Finland (Baltic Sea) in July 1996
- NP061 **STOENS, A.**; MENKES, C.; BANDONNEAU, Y.; MEMERY, L.; GRIMA, N.  
New production in the equatorial Pacific: a coupled dynamical/biogeochemical modelling
- NP062 **THOUZEAU, G.**; **CHEVALIER, C.**; TEMPERVILLE, A.  
Modelling of deposition/resuspension processes in the English Channel
- NP063 **PUGALOVA, S.S.**; **RYABCHENKO, V.A.**  
Modelling the phytoplankton succession in the Barents Sea

**NP3 Transport and mixing in geophysical flows**  
**.5 Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere (co-sponsored by OA & ST) I**

Convener: Haynes, P.H.  
**Monday, 20 April 1998**  
Lecture Room: M3  
Chairperson: Vautard, R.

**I. Reacting flows**

- 14:00 **TEL, T.**; TOROCZKAI, X.  
Advection of active particles in open chaotic flows (Solicited Paper) \*
- 14:30 **HAYNES, P.H.**; TAN, D.G.H.  
An ensemble approach to predicting chemical evolution in chaotic advection flow
- 14:45 **HEINZ, S.**  
Mixing and reaction in stratified flow: Lagrangian PDF methods

- 15:00 MCKENNA, D.  
Coupling between chemistry and mixing in a simple reaction diffusion system
- 15:15 HONORE, C.; VAUTARD, R.  
Sensitivity of ozone photochemistry in a polluted area
- 15:30 Joint session ST16/NP3.05 will continue on Thursday

### NP3 Transport and mixing in geophysical flows

#### .5 Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere (co-sponsored by OA & ST) II

Conveners: Haynes, P.H.; Wirth, V.

Thursday, 23 April

Lecture Room: M3

Chairperson: Waugh, D.W.

#### Joint session with ST16

##### a) Techniques such as RDF

- 14:00 MCKENNA, D.; BUJOK, O.; THOMAS, N.  
Comparison of RDF with in-situ data (Solicited Paper)
- 14:30 AMBAUM, M.; BUJOK, O.  
Correction for phase errors in lagrangian modelling of tracer filaments
- 14:45 BITHELL, M.; GRAY, L.J.  
Isentropic and three dimensional trajectories near the tropopause
- 15:00 METHVEN, J.; HOSKINS, B.  
On the advection of high resolution tracers by low resolution winds
- 15:15 MARIOTTI, A.; LEGRAS, B.; MECHOSO, C.R.  
Pseudo-contour advection with surgery

##### b) Studies using observed/model winds

- 15:30 SHUCKBURGH, E.  
Investigating transport across the tropopause
- 15:45 BAGLIANI, M.; FRAEDRICH, K.; VON HARDENBERG, J.; LUNKEIT, F.  
Lagrangian climatology of a simplified general circulation model
- 16:00 LAPEYRE, G.; LEGRAS, B.  
A criterion for the formation of filaments around the polar vortex
- 16:15 BRUNET, G.; GRAVEL, S.; ROCH, M.; GAUTHIER, P.; PELLERIN, S.; EK, N.; EDOUARD, S.  
High resolution forecasts of polar stratospheric ozone using the Canadian Global Environmental Multiscale Model
- 16:30 END OF PART II

\* not included in the Book of Abstracts

### NP3 Transport and mixing in geophysical flows

#### .5 Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere (co-sponsored by OA & ST) - Poster Session

Convener: Haynes, P.H.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 3 - NP

Chairperson: Haynes, P.H.

- NP065 KOSTADINOV, I.; GIOVANELLI, G.; RAVEGNANI, F.; EVANGELISTI, F.; AGOSTINI, P.; CUZZOLA, V.; BONASONI, P.  
Stratospheric ozone, nitrogen oxide and temperature measurements at (44N, 11E) during 1996-97
- NP066 LUKASHIN, V.N.; ISAEVA, A.B.; SEROVA, V.V.; GORDEEV, V.YU.; STEIN, R.  
Aerosol studies over North Atlantic
- NP071 BALIS, D.; PAPAYANNIS, A.; GALANI, E.; MARENCO, F.; SANTASECARIA, V.; ZIOMAS, I.; ZEREFOS, C.  
Two years lidar aerosol measurements at Thessaloniki, Greece
- NP072 LARCHEVEQUE, G.; SIMEONOV, V.; VAN DEN BERGH, H.; CALPINI, B.  
The Swiss EPFL lidar in the EU WINTEX pilot study
- NP073 BEDNAR, J.; BRECHLER, J.; HALENKA, T.  
On the modelling of climatological characteristics of photochemical smog in Bohemian basin
- NP074 ANQUETIN, S.; CHOLLET, J.P.  
Thermal inversion impacts on the mixing properties of the low atmosphere within a deep valley
- NP075 CASTRACANE, P.; RAO, M.P.; CASADIO, S.; CACCIANI, M.; CALISSE, P.G.; FIOCCO, G.  
Observation of atmospheric boundary layer characteristics over an urban site
- NP076 BAGLIANI, M.  
An evaluation of the asymmetry of turbulence in the atmospheric boundary layer
- NP077 MERCIER, P.; HOURDIN, F.; BOUCHER, O.; PHAM, M.; HAUGLUSTAINE, D.; GRANIER, C.  
Greenhouse gases in the LMD-Z general circulation model
- NP078 BITHELL, M.; PEPLER, S.J.  
Adaptive parcel advection
- NP078A BUJOK, O.; MCKENNA, D.S.  
On the use of the RDF-Technique for the Interpretation of high-resolution tracer measurements in the tropopause region: a case study
- NP078B HAYNES, P.H.; BALLUCH, M.G.  
Quantification of lower stratospheric mixing processes using aircraft data
- NP078C GOUGET, H.; CAMMAS, J.-P.  
Stratosphere-troposphere exchange in the subtropics of the southern hemisphere: a case study from the aircraft campaign TROPOZII over Argentina in January 1991 \*

NP

NP078D SIMON, P.  
PV/ozone correlations near the tropopause from  
ECMWF analysis of MOZAIC measurements \*

### **NP3 Transport and mixing in geophysical flows**

#### **.5 Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere (co-sponsored by OA & ST) III**

Conveners: Haynes, P.H.; Wirth, V.  
**Friday, 24 April 1998**  
Lecture Room: M3  
Chairperson: McKenna, D.

#### Joint session with ST16 (continued) c) Lower stratospheric tracer studies

- 08:30 WAUGH, D.W.  
Seasonal variation of stirring and mixing in the lower stratosphere (Solicited Paper)
- 09:00 ALFIER, R.; PAWSON, S.; KETELSEN, K.  
Fine structure of water vapour transport at the polar vortex
- 09:15 LEDER, S.; BECK, A.  
The relationship between the exchange across the subtropical barrier and planetary wave activity in a global model
- 09:30 GODIN, S.; BERGERET, V.; BEKKI, S.; DAVID, C.; HAUCHECORNE, A.  
Lidar aerosol measurements showing the stratified structure of the Antarctic polar vortex in the spring of 1992
- 09:45 HAUCHECORNE, A.; GODIN, S.; SOUPRAYEN, C.  
Meridional transport of ozone in the lower stratosphere at middle latitudes: lidar observations and simulation with a high resolution advection model
- 10:00 ROZANOV, E.; ZUBOV, V.; SCHLESINGER, M.; YANG, F.; ANDRONOVA, N.  
Simulation of trace-gas distributions with the UIUC 3-D atmospheric chemical-transport model and comparison of source gas distributions with observations
- 10:15 CAHILL, M.; PLANTEVIN, P.H.; LAW, K.S.; SHALLCROSS, D.E.; CHIPPERFIELD, M.; EVANS, M.; PYLE, J.A.; GERBIG, C.; RICHER, H.; BAUGUITTE, S.; BANDY, B.; MILLS, G.; PENKETT, S.  
A comparison of flight measurements from summer '97 with TOMCAT
- 10:30 END OF JOINT SESSION/session NP3.5 continues

### **NP3 Transport and mixing in geophysical flows**

#### **.5 Transport and mixing of chemical species in the atmosphere, including urban and regional problems in the troposphere and global-scale problems in the troposphere and stratosphere (co-sponsored by OA & ST) III**

Convener: Haynes, P.H.  
**Friday, 24 April 1998**  
Lecture Room: M3  
Chairperson: Haynes, P.H.

#### II. Chemical and tracer modelling

- 11:00 VAUTARD, R.; BEEKMANN, M.  
The role of regional transport in urban photochemistry (Solicited Paper)
- 11:30 SOULHAC, L.; PERKINS, R.J.  
Modelling the turbulent dispersion of pollutants in city streets
- 11:45 BAUER S.; LANGMANN, B.; JACOB, D.  
Model hierarchy for the determination of meteorological and chemical processes
- 12:00 ARMENGAUD, A.; ANDERSEN, K.K.; GENTHON, C.  
A tracer climate model based on the LMDZ AGCM
- 12:15 ISNARD, O.; PERKINS, R.J.  
Dispersion through large groups of obstacles
- 12:30 END OF SESSION

### **NP3 Transport and mixing in geophysical flows**

#### **.6 Mixing in the interior of the Earth (recycling of subducted slabs) (co-sponsored by SE) I**

Convener: Ricard, Y.  
**Monday, 20 April 1998**  
Lecture Room: M3  
Chairperson: N.N.

- 15:45 KELLOGG, L.H.; HUNT, D.L.  
Quantifying mixing in numerical models of mantle convection (Solicited Paper)
- 16:15 LEWIN, E.  
Is there a missing link between geochemistry and geophysics of the convective mantle? (Solicited Paper)
- 16:45 END OF PART I
- 17:00 Opening
- 19:30 Reception

### NP3 Transport and mixing in geophysical flows

#### .6 Mixing in the interior of the Earth (recycling of subducted slabs) (co-sponsored by SE) II

Convener: Ricard, Y.

Tuesday, 21 April 1998

Lecture Room: M3

Chairperson: N.N.

- 08:30 **SCHMALZL, J.**; HANSEN, U.  
Mixing in vigorous, time-dependent 3D convection (Solicited Paper)
- 09:00 **TEN, A.**; PODLADCHIKOV, YU.YU.; YUEN, D.A.  
Mixing efficiency in the upper mantle
- 09:15 **PELTIER, W.R.**; BUTLER, S.L.  
Convective mixing controlled by phase transitions and the size distribution of chemical heterogeneities in the Earth's mantle
- 09:30 **O'CONNELL, R.J.**; GABLE, C.W.; MANGA, M.  
Effects of toroidal flow and rheological heterogeneities on mixing in the mantle
- 09:45 **FERRACHAT, S.**; RICARD, Y.  
Mantle mixing: influence of 3-Dimensionality and viscosity stratification
- 10:00 Session NP3.1 to continue

### NP4 Nonlinear waves, coherent structures and natural hazards

#### .1 Nonlinear waves, instabilities and wave-flow interactions

Convener: Shrira, V.I.

Co-Convener(s): Ostrovsky, L.A.

Thursday, 23 April 1998

Lecture Room: IRIS

Chairperson: N.N.

#### Surface waves

- 08:30 **OSBORNE, A.R.**  
Towards numerical resolution of the periodic inverse scattering for the Kadomtsev-Petviashvili (KP) equation
- 08:45 **ONORATO, M.**; OSBORNE, A.R.  
Shallow water surface waves: the Whitham expansion, KDV hierarchy and lie transform
- 09:00 **ANNENKOV, S.YU.**; SHRIRA, V.I.  
A model of sporadic wind-wave horse-shoe patterns
- 09:15 **FRISON, T.W.**  
Nonlinear characteristics of ocean wave observations
- 09:30 **VAN DUIN, C.A.**  
The effect of non-uniformity of a wave train on the mechanism of Benjamin-Fier instability
- 09:45 **WASEDA, T.**; TULIN, M.P.  
Experimental study of the stability of deep water wave trains including wind effects
- 10:00 **PETTI, M.**; LONGO, S.  
Swash zone measurements in a wave flume
- 10:15 **BROCCHINI, M.**  
An analytical solution for the run-up of weakly 2-D solitary waves
- 10:30 **BREAK**

Chairperson: N.N.

- 11:00 **SAZONOV, I.**; SHRIRA, V.; CAULLIEZ, G.  
Some properties of wind waves propagating on surface currents
- 11:15 **PAVLOV, V.**; EIFLER, W.  
Some remarks on the problem of wind wave generation in a rotational flow

#### Internal waves and coastal dynamics

- 11:30 **FALQUES, A.**; CALVETE, D.; DE SWART, H.E.; DODD, N.  
Sand ridges and bed-flow instabilities on the inner continental shelf
- 11:45 **KOMAROVA, N.L.**; NEWELL, A.C.  
Nonlinear theory of sand patterns
- 12:00 **WEBER, J.E.**; DEBERNARD, J.  
Mass transport induced by a slowly moving corrugated plate in a viscous rotating fluid
- 12:15 **APEL, J.R.**; FINETTE, S.I.; ORR, M.H.  
A new analytical model for oceanic internal soliton packets
- 12:30 **SEREBRYANY, A.N.**; SABININ, K.D.  
Sea surface manifestations of large-amplitude internal waves during different wind conditions
- 12:45 **LUNCH**

Chairperson: N.N.

- 14:00 **RAMIREZ, C.**; RENOUEARD, D.  
Passing of an internal solitary wave over a step
- 14:15 **SMALL, J.**  
Evidence of non-linear internal wave packet interactions at a shelf edge
- 14:30 **KOUDELLA, C.R.**; STAQUET, C.  
Three-dimensional internal gravity waves: a high-resolution numerical study
- 14:45 **PELINOVSKY, E.**; TALIPOVA, T.; SLUNYAEV, A.; GRIMSHAW, R.; HOLLOWAY, P.  
Variable-coefficient rotation-modified extended Korteweg-de Vries equation for oceanic internal waves

#### Rossby waves & vortices

- 15:00 **GREENSLADE, M.D.**; VANNESTE, J.  
Numerical simulation of explosive resonant interaction of Rossby waves
- 15:15 **BREVDO, L.**; KIRCHGÄSSNER, K.  
Structure formation in a zonal barotropic current: a treatment via the centre manifold reduction
- 15:30 **KALADZE, T.D.**; SHUKLA, P.K.  
Free nonlinear vortical Rossby structures in the Earth's ionosphere
- 15:45 **REZNIK, G.M.**; BENIKOV, E.; GRIMSHAW, R.  
Long-term evolution of intense barotropic vortex on beta-plane

#### Stability & miscellaneous

- 16:00 **SUN, Z.L.**; MU MU; JI, Z.Z.  
Numerical investigation of the nonlinear stability and instability of quasigeostrophic motions
- 16:15 **MU MU; MOZHI, T.**  
Nonlinear stability and instability of zonal wind in the atmosphere

NP

- 16:30 **BENILOV, E.**  
On the linear approximation of velocity and density profiles in the problem of baroclinic instability
- 16:45 **OSTROVSKY, L.A.; GRIMSHAW, R.H.J.; HE, J.-M.**  
Terminal radiative damping of a solitary wave in rotational systems
- 17:00 **LE ROUX, D.Y.; LIN, C.A.; STANFORTH, A.**  
A semi-Lagrangian finite element barotropic ocean model
- 17:15 **SHREIBER, I.**  
Acoustic properties surface and sediment bottom of the sea

Stand-by paper:

ROMANOVA, N.N.

Hamiltonian approach to the derivation of evolution equations for nonlinear wave-packets in unstable media

17:30 END OF SUB-SESSION

#### **NP4 Nonlinear waves, coherent structures and natural hazards**

##### **.1 Nonlinear waves, instabilities and wave-flow interactions - Poster Session**

Convener: Shrira, V.I.

Co-Convener(s): Ostrovsky, L.A.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:30 - 19:00

Poster Area: AGORA 3 - NP

- NP079 **MEDVEDEV, S.B.**  
Normal forms for shallow water equations
- NP080 **ANNENKOV, S.YU.; BADULIN, S.I.**  
A model of quasi-permanent three-dimensional gravity-capillary water wave patterns
- NP081 **PONTIER, R.; CHEN, G.; KHARIF, C.**  
Effect of air turbulence on the Benjamin-Feir instability of gravity waves on deep water
- NP082 **LANDRINI, M.; OSHRI, O.; WASEDA, T.; TULIN, M.P.**  
Long time evolution of gravity waves
- NP083 **CLAMOND, D.**  
Renormalization of shallow water gravity wave theories to allow deep water
- NP084 **GVELESIANI, T.; JINIKHASHVILY, G.; CHANTURIA, A.**  
Application of the wave theories for waves generated in reservoirs by earthquakes
- NP085 **MELADZE, H.; GVELESIANI, T.; MASS, E.; CHANTURIA, A.**  
The flux vector splitting method for the numerical solution of shallow water equations
- NP086 **GVELESIANI, A.; KALADZE, T.D.**  
Captured by flows nonlinear Rossby waves in the Earth's ionosphere
- NP087 **FOURNIER, A.**  
Formulation of energetic triadic interactions in the orthonormal wavelet representation of fluid dynamics
- NP088 **KURKIN, A.A.**  
The Hamiltonian description of waves in a stratified rotating fluid

- NP089 **DROBZHEVA, YA.; KRASNOV, V.**  
Initial signature and vertical-oblique acoustic pulse propagation model in atmosphere \*
- NP090 **TULIN, M.P.; WASEDA, T.**  
Laboratory observations of wave group evolution, including breaking effects

#### **NP4 Nonlinear waves, coherent structures and natural hazards**

##### **.2 Fluctuations, self-organization and natural hazards (co-sponsored by NH) - Poster Session**

Convener: Moiseev, S.S.

Co-Convener(s): Mendes-Victor, L.A.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:30 - 19:00

Poster Area: AGORA 3 - NP

Editor: Eidelman, A.E.

- NP091 **CORELA, C.; MENDES-VICTOR, L.A.**  
NP4.2-012 A nonlinear dispersive wave model for tsunami propagation
- NP092 **VASSALO PEREIRA, J.**  
NP4.2-013 Deterministic description of a phase transition in a medium, of interacting waves

#### **NP4 Nonlinear waves, coherent structures and natural hazards**

##### **.2 Fluctuations, self-organization and natural hazards (co-sponsored by NH)**

Convener: Moiseev, S.S.

Co-Convener(s): Mendes-Victor, L.A.

Friday, 24 April 1998

Lecture Room: M1

Chairperson: Erokhin, N.S.

Editor: Eidelman, A.E.

- 08:45 **FRISCH, U.; MAZZINO, A.; VERGASSOLA, M.**  
NP4.2-001 Intermittency for passive scalar advection (Solicited Paper)
- 09:15 **SERIO, M.; BERGAMASCO, L.; ONORATO, M.; OSBORNE, A.R.**  
NP4.2-002 Multifractal structure of the air transmittency small scale fluctuations
- 09:30 **EROKHIN, N.S.; MOISEEV, S.S.; PANKOV, V.M.; SMIRNOV, N.K.; ZABYSHNYI, A.I.; VOLKOV, A.M.; KHAPIN, YU.B.**  
NP4.2-003 Scientific problems of the space project "Precursor"
- 09:45 **SMITH, L.A.**  
NP4.2-004 Towards early warning: are self-organised critical systems predictable?
- 10:00 **KIKUCHI, H.**  
NP4.2-005 Uncharged particle acceleration and critical ionization flow by electric reconnection and their applications
- 10:15 **REDONDO, J.M.; SANCHEZ, M.A.;**  
NP4.2-006 CANTALAPIEDRA, I.R.; CASTILLA, R.  
Vortical structures in stratified turbulent flows
- 10:30 **BREAK**

Chairperson: Moiseev, S.S.  
Editor: Eidelman, A.E.

- 11:00 MOISEEV, S.S.  
NP4.2- Generation of structures in geophysical and geo-like  
007 media without a symmetry center (Solicited Paper)  
11:30 CHKHETIANI, O.G.; GOLBRAIKH, E.;  
NP4.2- MOISEEV, S.S.  
008 Mechanisms of mean helicity generation and its role  
in crisis atmospheric situations  
11:45 KURGANSKY, M.V.  
NP4.2- Vorticity genesis in the moist atmosphere  
009  
12:00 EIDELMAN, A.; BRANOVER, H.  
NP4.2- Estimation of helicity parameters in WIND spectra  
010 and in laboratory experiments  
12:15 EROKHIN, N.S.; MOISEEV, S.S.; SHARKOV,  
NP4.2- E.A.  
011 On cells merging resulting to a large eddy forming  
12:30 CORELA, C.; MENDES-VICTOR, L.A.  
NP4.2- A nonlinear dispersive wave model for tsunami  
012 propagation (Oral + Poster)  
12:45 MOISEEV, S.S.; MENDES-VICTOR, L.A.  
Concluding remarks  
13:00 END OF SUB-SESSION

**NP4 Nonlinear waves, coherent structures and  
natural hazards  
.3 Shallow water experiments as models  
of geophysical and astrophysical flows**

Convener: Sommeria, J.  
Co-Convener(s): Nezlin, M.V.  
**Monday, 20 April 1998**  
Lecture Room: IRIS  
Co-sponsored by: INTAS  
Chairperson: Nezlin, M.V.

- 08:30 DOLZHANSKII, F.V.  
Transverse structure of Q2D geophysical and  
magnetodynamical flows (Solicited Paper)  
09:00 VAN DE KONIJNENBERG, J.A.; NIELSEN, A.H.;  
RASMUSSEN, J.J.; STENUM, B.  
Influence of the beta effect on shear-flow instability  
09:15 DANILOV, S.; SAZONOV, I.A.  
Interaction of zonal flow with topography. Laboratory  
and numerical simulations  
09:30 STUHNE, G.R.; PELTIER, W.R.  
Shallow water experiments with a spherical  
icosahedron-based multigrid model  
09:45 IACONO, R.; STRUGLIA, M.V.; RONCHI, C.;  
NICASTRO, S.  
Large scale dynamics of freely decaying shallow-  
water turbulence on a sphere  
10:00 SUTYRIN, G.G.  
Physical mechanism of an intense vortex motion  
(Solicited Paper)  
10:30 BREAK

Chairperson: Rasmussen, A.H.

- 11:00 NEZLIN, M.; RYLOV, A.; TITISHOV, K.;  
CHERNIKOV, G.  
Meridional drift of the Rossby vortices

- 11:15 BEN JELLOUL, M.; STEGNER, A.  
Large-scale vortices: stability and departure from  
geostrophy  
11:30 SNEZHNIKIN, E.; SOMMERIA, J.  
Generation of vortex patterns and spiral waves in a  
shallow water annular shear  
11:45 SCHÄR, C.  
Flow past isolated topography: a comparison be-  
tween continuously stratified and shallow-water  
dynamics  
12:00 BRACCO, A.; PROVENZALE, A.; SPIEGEL, E.A.  
Spotted disks  
12:15 KOVALENKO, I.G.; LEVY, V.V.; LUKIN, D.V.  
Quasi-two-dimensional modelling of thin astrophysi-  
cal gaseous disks  
12:30 KOVALENKO, I.G.; LEVY, V.V.; MUSTSEVOJ,  
V.V.  
Numerical simulation of instability in rotating shea  
layer in galactic disks and shallow water experiments  
12:45 NOSOV, M.A.; LEVIN, B.W.; RYKUNOV, L.N.  
Modelling of the mechanism of ocean surface  
cooling by underwater earthquake  
13:00 END OF SUB-SESSION  
17:00 Opening  
19:30 Reception

**NP4 Nonlinear waves, coherent structures and  
natural hazards  
.3 Shallow water experiments as models  
of geophysical and astrophysical flows  
- Poster Session**

Convener: Sommeria, J.  
Co-Convener(s): Nezlin, M.V.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: AGORA 3 - NP  
Co-Sponsored by: INTAS

- NP093 HANNACHI, A.  
Assimilation by periodic updating in a simple  
Hamiltonian system and application to a simpli-  
fied shallow water model  
NP094 CHERNIKOV, G.P.; NEZLING, M.V.  
On the mechanism of the Rossby vortex meridio-  
nal drift  
NP095 TOMASINI, M.  
A spectral domain decomposition method to  
resolve a strong localized shear layer  
NP096 VAN DE KONIJNENBERG, J.A.; NIELSEN,  
A.H.; RASMUSSEN, J.J.; STENUM, B.  
Particle tracing in a circular shear layer  
NP097 BASTIN, M.E.  
A laboratory study on the structure and dynamics  
of baroclinic vortices on a polar  $\beta$ -plane

---

**Free Subscription**

to *Nonlinear Processes in Geophysics* for ON-SITE regis-  
trants. Please contact the EGS Office before 31 May 1998.

---

NP



## NP5 Vortex dynamics - Poster Session

Convener: Zeitlin, V.

Co-Convener(s): Dritschel, D.G.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: AGORA 3 - NP

- NP098 DAWAI, T.; PAVLOV, V.  
Dynamics of point-vortex structures in a time-dependent coastal (river) 2D-flow
- NP099 GONCHAROV, V.P.; PAVLOV, V.I.  
Trajectories of vortices emitted into river Mouth
- NP101 POTYLITSIN, P.G.; PELTIER, W.R.  
Three-dimensional instabilities of columnar vortices on the F-plane
- NP102 FOURNIER, A.  
Triadic interaction of observed atmospheric blocking- and cyclonic-scale vortices in the orthonormal wavelet representation

## NP5 Vortex dynamics

Convener: Zeitlin, V.

Co-Convener(s): Dritschel, D.G.

Friday, 24 April 1998

Lecture Room: IRIS

Chairperson: N.N.

- 08:30 VON HARDENBERG, J.; PROVENZALE, A.; MCWILLIAMS, J.C.; SHCHEPETKIN, A.; WEISS, J.B.  
Vortex merging in quasigeostrophic flows: a Lagrangian view
- 08:45 BRACCO, A.; MURANTE, G.; PROVENZALE, A.; MCWILLIAMS, J.C.; WEISS, J.B.  
Vortex statistics in two-dimensional turbulence
- 09:00 CHAVANIS, P.H.  
Systematic drift experienced by a point vortex in 2D turbulence
- 09:15 VALLIS, G.K.; OETZEL, K.  
Vortices in the enstrophy inertial range: a phenomenological theory
- 09:30 DANILOV, S.; DOLZHANSKII, F.V.  
Upscale energy transfer in quasi-two-dimensional turbulence with bottom friction
- 09:45 NAZARENKO, S.; DUBRULLE, B.; LAVAL, J.-P.  
Non-local 2D turbulence: a two fluid approach
- 10:00 CAILLOL, P.; LEGRAS, B.; DRITSCHEL, D.G.  
Erosion of a distributed vortex by a growing shear
- 10:15 VELASCO FUENTES, O.U.  
Evolution of a lamb quadrupolar vortex
- 10:30 BREAK

Chairperson: N.N.

- 11:00 LEBLANC, S.  
Hyperbolic instability in rotating dipoles
- 11:15 CARTON, X.; CORREARD, S.  
Tripolar vortices in stratified geostrophic flows
- 11:30 ROBINS, R.E.; DELISI, D.P.  
Numerical simulation of nonlinear instabilities of counter-rotating vortex pairs in stratified and unstratified fluid
- 11:45 DANILOV, S.; GRYANIK, V.; OLBERS, D.  
Lateral spreading of strip-shaped convective region as derived from a two-layer heton model

- 12:00 DORONINA, T.; GRYANIK, V.; OLBERS, D.; WARNCKE, T.  
A 3-D heton mechanism of lateral spreading in a stratified rotating fluid
- 12:15 VERKLEY, W.T.M.  
Salmon's hamiltonian approach to balanced flow applied to a one-layer isentropic model on a sphere
- 12:30 HOLM, D.D.; ZEITLIN, V.  
Hamilton's principle for quasigeostrophic motion
- 12:45 STEGNER, A.; DRITSCHEL, D.G.  
Numerical investigation on the stability of isolated vortices beyond the quasi-geostrophic description
- 13:00 LUNCH

Chairperson: N.N.

- 14:00 BEN JELLOUL, M.; ZEITLIN, V.  
Stability of large-scale vortices: from shallow-water to frontal dynamics
- 14:15 KUO, A.; POLVANI, L.  
A direct example of wave-vortex interaction in rotating shallow water
- 14:30 NEVEN, E.C.  
Balanced models. Part I: theory
- 14:45 NEVEN, E.C.  
Balanced models. Part II: numerics
- 15:00 POLVANI, L.; PLUMB, R.A.; DRITSCHEL, D.G.  
The breaking of Rossby waves at the bottom of the stratospheric polar vortex
- 15:15 BRUNET, G.; MONTGOMERY, M.  
Rossby wave dynamics on smooth circular vortices: theory and application to the polar vortex
- 15:30 BREAK

Chairperson: N.N.

- 16:00 HSU, C.J.; PLUMB, R.A.  
Forced divergent anticyclones and the Monsoon vortex
- 16:15 VANDERMEIRSCH, F.; CARTON, X.J.; MOREL, Y.G.  
Interaction between a coherent eddy and a thin zonal ocean jet using a two-and-a-half-layer quasi-geostrophic model
- 16:30 SOKOLOVSKIY, M.; VERRON, J.  
Interactions between finite-core hetons
- 16:45 AIKI, H.; YAMAGATA, T.  
Regular formation of eddies in the intermediate layer
- 17:00 SALUSTI, E.; SERRAVAL, R.  
On the erdel and impermeability theorems for slightly viscous currents, with oceanographic applications
- 17:15 SERRAVAL, R.; CARNEVALE, G.; ORLANDI, P.  
Coastal current bifurcations due to topography: sensitivity to variations of the vorticity profile of the coastal current
- 17:30 SERRAVAL, R.; ZAVALA-SANSON, L.; VAN HEIJST, G.J.F.  
Experiments on the bifurcation of a coastal current in presence of a topographic slope
- 17:45 JOHNSON, E.R.  
Beach vortices
- 18:00 ZYRYANOV, V.N.  
On the problem of a current's periodical structure in the vicinity of seamounts in a tidal sea
- 18:15 END OF SESSION

# Natural Hazards

## NH1 Extreme events in the sea and near shore and coastal hazards

### .1 Sea surges and storms (co-sponsored by NP)

Convener: Osborne, A.R.  
Co-Convener(s): Tinti, S.  
Tuesday, 21 April 1998  
Lecture Room: R6  
Chairperson: N.N.

- 08:30 CAVALERI, L.; BERTOTTI, L.  
General aspects of modelling, forecasting and analyzing wind-wave fields and sea level rising
- 08:45 CAVALERI, L.; BERTOTTI, L.  
Critical considerations on wind climatology from different data sources
- 09:00 OSBORNE, A.R.; ONORATO, M.; SERIO, M.; BERGAMASCO, L.; PETTI, M.  
Search for higher order non linear effects in shallow water in a wave tank facility
- 09:15 FERREIRA, E.; DIAS, J.A.  
Prediction of coastal erosion and shoreline retreat associated to "mean" and "centenary" storms at the Portuguese coast
- 09:30 OSBORNE, A.R.; ONORATO, M.; SERIO, M.; BERGAMASCO, L.  
Inverse scattering transform I: nonlinear Fourier analysis with cnoidal wave basis functions
- 09:45 OSBORNE, A.R.; ONORATO, M.; SERIO, M.; BERGAMASCO, L.; CAVALERI, L.  
Inverse scattering transform II: nonlinear Fourier analysis of Adriatic Sea surface wave data
- 10:00 SEREBRYANY, A.N.  
Internal waves of extreme amplitudes in the ocean
- 10:15 SOBOLEV, Y.A.P.; MIKHAILOV, Y.U.M.  
Typhoons in Caribbean region registered on satellites in VLF band
- 10:30 PELINOVSKY, E.; KIT, E.  
Cross-shore dynamics of surf zone affected by storms
- 10:45 END OF SUB-SESSION

## NH1 Extreme events in the sea and near shore and coastal hazards

### .1 Sea surges and storms (co-sponsored by NP) - Poster Session

Convener: Osborne, A.R.  
Co-Convener(s): Tinti, S.  
Display Time: Monday, 09:00 - Friday, 13:00  
Authors in Attendance: Wednesday, 17:00 - 19:00  
Poster Area: RHODES - NH

- NH023 PUGLIESE CARRATELLI, E.; DODD, N.; GIARRUSSO, C.C.; SPULSI, G.  
Wave hazard mapping
- NH024 DIAS, J.M.; LOPES, J.F.; DEKEYSER, I.  
Study of a storm surge event in Ria de Aveiro, Portugal

- NH025 GIMENO, L.; RUA, A.; DOCAMPO, C.; VILAR, P.; TEJEIRO, I.  
Extreme wave events producing shipwrecks in the coast of Galicia (Spain)
- NH026 CALINI, A.; SCHÖBER, C.M.  
Chaotic dynamics for symmetry-breaking perturbations of integrable equations

## NH1 Extreme events in the sea and near shore and coastal hazards

### .2 Submarine landsliding

Convener: Heinrich, P.  
Co-Convener(s): Eva, C.  
Monday, 20 April 1998  
Lecture Room: STUDIO  
Chairperson: N.N.

- 11:00 HEINRICH, PH.; SABATIER, P.C.; RZADKIEWICZ, S.  
The landslide tsunami of October 16, 1979, Nice, France
- 11:20 BOURILLET, J.F.; HEINRICH, P.; RZADKIEWICZ, S.; SAVOYE, B.  
Numerical modelling of a submarine avalanche: the 1979 Nice event (French Riviera)
- 11:40 PELINOVSKY, E.; DOLINA, I.  
Simplified theory of the surface and internal wave generation by the submarine landslide
- 12:00 RIHM, R.; KRASTEL, S.; JACOBS, C.; SCHMINCKE, H.-U.; ALIBES, B.; ROSENKRANZ, C.  
Debris avalanches identified on the flank of all Canary Islands
- 12:20 THEILEN, FR.; MÜLLER, CH.; RIEDEL, M.  
Submarine landslides on the flanks of the Canary Islands
- 12:40 END OF SUB-SESSION
- 17:00 Opening
- 19:30 Reception

## NH1 Extreme events in the sea and near shore and coastal hazards

### .3 Tsunamis

Convener: Piatanesi, A.  
Co-Convener(s): Baptista, M.A.  
Tuesday, 21 April 1998  
Lecture Room: R6  
Chairpersons: Piatanesi, A.; Baptista, A.  
Editors: Piatanesi, A.; Heinrich, Ph.; Tinti, S.

- 11:00 ANDRADE, C.; MIRANDA, J.M.; FREITAS, M.C.; BAPTISTA, M.A.; CACHCO, M.; MUNHA, J.M.; SILVA, P.  
Use of magnetic susceptibility methods for the identification of tsunami deposits in the Tagus estuary
- 11:15 PERISSORATIS, C.; PAPADOPOULOS, G.  
Sediment slumping in the south Aegean Sea and the case history of the 1956 tsunami
- 11:30 TINTI, S.; BORTOLUCCI, E.; PIATANESI, A.  
Identification of the source fault of the 1908 Messina earthquake through tsunami modelling, is it a possible task?

- 11:45 **TINTI, S.; ROMAGNOLI, C.; BORTOLUCCI, E.**  
 NH1.3-004 Modelling a possible holocene landslide-induced tsunami at Stromboli volcano, Italy
- 12:00 **HEINRICH, PH.; IHLME, P.; SCHINDELE, F.; GUIBOURG, S.; ROCHE, R.**  
 NH1.3-005 Numerical modelling of the 1996 Peruvian tsunami
- 12:15 **PIATANESI, A.; HEINRICH, PH.; AVOUAC, J.P.H.; SCHINDELE, F.; TINTI, S.**  
 NH1.3-006 Numerical simulations of the October 4, 1994 Shikotan (Kuril Islands) tsunami
- 12:30 **PELINOVSKY, E.; GOLIN'KO, V.; OSIPENKO, N.**  
 NH1.3-007 Runup of tsunami waves on gentle beaches in a basin of a complex topography
- 12:45 **MARAMAI, A.; TINTI, S.; PISCINI, A.**  
 NH1.3-008 The "pilot" Italian monitoring and alarm system for the Calabrian-Sicilian tsunamis: state of the art
- 13:00 **NOSOV, M.A.**  
 NH1.3-009 The tsunami generation as a process running in the compressible fluid
- 13:15 **END OF SUB-SESSION**

## **NH1 Extreme events in the sea and near shore and coastal hazards**

### **.3 Tsunamis - Poster Session**

Convener: Piatanesi, A.  
 Co-Convener(s): Baptista M.A.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:00 - 19:00**  
 Poster Area: RHODES - NH  
 Editors: Piatanesi, A.; Heinrich, Ph.; Tinti, S.

- NH027 **MÖRNER, N.-A.**  
 NH1.3-010 Paleo-tsunamis in northwestern Europe
- NH028 **HILLS, J.G.; GODA, M.P.; MADER, C.L.; WARREN, M.S.**  
 NH1.3-011 Tsunami from asteroid and comet impacts: the vulnerability of Europe

## **NH2 Meteorological and hydrological hazards (co-sponsored by HS)**

### **.1 Uncertainty assessment in meteorologic hydrologic warning**

Convener: Todini, E.  
 Co-Convener(s): Castelli, F.  
**Monday, 20 April 1998**  
 Lecture Room: STUDIO  
 Chairperson: N.N.

- 14:00 **STORTI, G.; FURCOLO, P.; VILLANI, P.**  
 Uncertainty assessment of extreme rainfall forecast
- 14:20 **LANGSRUD, O.; FRIGESSI, A.; HISDAL, H.; HOST, G.; SCHJODT-OSMO, O.; SKAUGEN, T.**  
 A statistical method for describing uncertainty in flood forecasts from a hydrological rainfall-runoff model based on meteorological forecasts
- 14:40 **BONGIOANNINI CERLINI, P.; MELCHIORRE, G.; TIBALDI, S.; TODINI, E.**  
 Combining limited area models quantitative precipitation forecasts with ground measurements
- 15:00 **GARROTE, L.; MOSQUERA, J.C.**  
 Uncertainty propagation in rainfall-runoff models
- 15:20 **LANZA, L.; LA BARBERA, P.**  
 Downscaling of rainfall predictions and uncertainty in the associated flood effects at the ground

- 15:40 **ONOF, C.; MACKAY, N.; CHANDLER, R.E.; WHEATER, H.S.**  
 A Bayesian approach to rainfall disaggregation
- 16:00 **MELLOR, D.; O'CONNELL, P.E.**  
 A stochastic approach to space-time rainfall forecasting
- 16:20 **END OF SUB-SESSION**
- 17:00 **Opening**
- 19:30 **Reception**

## **NH2 Meteorological and hydrological hazards (co-sponsored by HS)**

### **.2 Prediction of hazardous events of meteorological origin**

Convener: Tibaldi, S.  
 Co-Convener(s): Alonso, S.  
**Tuesday, 21 April 1998**  
 Lecture Room: STUDIO  
 Chairperson: Todini, E.

- 09:00 **HOMAR, V.; TUDURI, E.; ROMERO, R.; RAMIS, C.; ALONSO, S.**  
 Synoptic and mesoscale diagnosis of a hailstorm situation in eastern Spain
- 09:15 **TESCARO, N.; SACCHETTI, D.; TROVATORE, E.**  
 Study on the role played by a minor mountain chain in triggering deep convection
- 09:30 **CACCIAMANI, C.; CESARI, D.; GRAZZINI, F.; PACCAGNELLA, T.; PANTONE, M.**  
 Mesoscale data assimilation of surface and upper air observations in intense precipitation events
- 09:45 **MINGUZZI, E.; PACCAGNELLA, T.**  
 Numerical simulation of heavy precipitation events using two different vertical coordinate systems
- 10:00 **STEIN, J.; HEREIL, P.; ASENSIO, N.**  
 Numerical simulations of the Vaison la Romaine flash flood
- 10:15 **SACCHETTI, D.; TESCARO, N.; TROVATORE, E.**  
 Heavy precipitation quantitative forecast: a comparison between measurements and limited area models outputs
- 10:30 **BREAK**

Chairperson: Alonso, S.

- 11:00 **REALE, O.**  
 Developing versus non-developing convective vortices into "hurricane-like" cyclones over the Mediterranean Sea
- 11:15 **TODINI, E.; VIGNOLI, R.**  
 Operational use of real-time flood forecasting
- 11:30 **FERRARIS, L.; ROMAIRONE, A.; SICCARDI, F.**  
 From flood forecasting to regional warning
- 11:45 **GUILBAUD, S.; OBLED, CH.**  
 Use of the reanalysed dataset of the NECP/NCAR to improve daily quantitative precipitation forecast by an analogue technique
- 12:00 **BENVENUTO, F.; MARANI, A.; SILVESTRI, S.**  
 Neural networks for data quality control
- 12:15 **DATIN, R.; GUILBAUD, S.; OBLED, CH.**  
 Using probabilistics distribution in a real time flash flood forecasting system
- 12:30 **END OF SUB-SESSION**

**NH2 Meteorological and hydrological hazards  
(co-sponsored by HS)**

**.2 Prediction of hazardous events of  
meteorological origin - Poster Session**

Convener: Tibaldi, S.

Co-Convener(s): Alonso, S.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: RHODES - NH

- NH001 **MARCHESE, S.; MORELLI, S.; STORTINI, M.**  
Numerical simulations of intense precipitation events using the ETA model
- NH002 **GARCIA-RUIZ, J.M.; WHITE, S.M.; BORDONABA, A.P.; MORENO, A.**  
Uncertainty assessment in the prediction of extreme rainfall events: an example from the central Spanish Pyrenees
- NH003 **CASSARDO, C.; GUO-YUE, N.; MIN-WEI, Q.; LONGHETTO, A.**  
Simulation of a severe weather episode in Piedmont (3-5 November 1994) using the coupled model RAMS-LSPM
- NH004 **CASSARDO, C.; GUO-YUE, N.; MIN-WEI, Q.; LONGHETTO, A.**  
Sensitivity experiments on the response of land surface with the coupled model RAMS-LSPM
- NH005 **GIBERGANS BAGUENA, J.; LLASAT, M.-C.**  
The use of artificial neural networks over thermodynamic data for extreme rainfall events classification and forecasting

**NH2 Meteorological and hydrological hazards  
(co-sponsored by HS)**

**.3 Flood hazards and flood risk: regional  
analysis of extremes (co-sponsored by  
OA)**

Convener: Bois, P.

Co-Convener(s): Oancea, V.

Wednesday, 22 April 1998

Lecture Room: STUDIO

Chairperson: N.N.

- 08:30 **FURCOLO, P.; ROSSI, F.; VILLANI, P.**  
Regional geostatistical analysis of very extreme rainfall and floods
- 08:45 **BONI, G.; CAVALLO, A.; SICCARDI, F.**  
Regional estimation of high intensity short duration rainfall events
- 09:00 **FERRARI, E.**  
Comparison of flood frequency models based on extreme rainfall analysis
- 09:15 **VERSIANI, B.R.; NAGHETTINI, M.C.; BOIS, P.**  
Regionalization of the extreme annual rainfall using the two-component extreme value model: discussion and application
- 09:30 **GOTTSCHALK, L.; WEINGARTNER, R.**  
Scaling of regional floods - an L-moments approach
- 09:45 **CASPARY, H.J.**  
Regional increase of winter floods in southwest Germany caused by atmospheric circulation changes

10:00 **CAMERON, D.S.; BEVEN, K.J.; BLAZKOVA, S.; NADEN, P.**

A methodology for the estimation of the impacts of climate change upon flood frequency (with uncertainty)

10:15 END OF SUB-SESSION

10:30 Session NH2.04 Continue

**NH2 Meteorological and hydrological hazards  
(co-sponsored by HS)**

**.3 Flood hazards and flood risk: regional  
analysis of extremes (co-sponsored by  
OA) - Poster Session**

Convener: Bois, P.

Co-Convener(s): Oancea, V.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Wednesday, 17:00 - 19:00

Poster Area: RHODES - NH

- NH006 **ARNAUD, P.; LAVABRE, J.**  
Flood predetermination model based on hourly rainfalls stochastic generation
- NH007 **WYZGA, B.**  
The frequency of low magnitude floods: a study of the reliability of the annual maximum series method
- NH008 **CHITALADZE, D.; KHVEDELIDZE, Z.**  
The influence of the local catastrophical phenomena in the atmosphere
- NH009 **GIMENO, L.; RUA, A.; BLANCO, M.; VIDUEIRA, D.**  
Analysis of the meteorological patterns producing flash flood in the Iberian Peninsula
- NH010 **BODRI, L.; CERMAK, V.**  
Last year summer floods in Moravia: what is the future?
- NH011 **MOSAEDI, A.**  
Increasing flooding risk considering sedimentation in the reservoir

**NH2 Meteorological and hydrological hazards  
(co-sponsored by HS)**

**.4 Modelling and flood mapping in rural  
and urban areas**

Convener: Oberlin, G.

Co-Convener(s): Roth, G.

Wednesday, 22 April 1998

Lecture Room: STUDIO

Co-sponsored by: EC/DG XII/Natural Hazard Section, CEMAGREF

Chairperson: Oberlin, G.

- 10:30 **CASALE, R.**  
Some key questions to scientists for a sustainable flood risk management (Solicited Paper)
- 11:00 **THOMA, C.; KULL, D.; NAE, F.**  
Estimation of flood prone areas in a river plain based on conventional and laser-scan developed digital elevation models (DEM)
- 11:15 **GENDREAU, N.; FARISSIER, P.**  
Mapping flood plains for a better river management
- 11:30 **PUECH, C.; RACLOT, D.**  
Using GIS and aerial photographs to determine the water levels during flood

\* not included in the Book of Abstracts

11:45 **KULL, D.**; THOMA, C.; NAEF, F.  
The effects of floodplains on floodwaves: an analysis  
and comparison of different modelling tools  
12:00 LUNCH  
12:00 Business Meetings

Chairperson: Roth, G.

14:00 **HORRITT, M.S.**  
Flood model validation using SAR imagery  
14:15 **BRILLY, M.**  
Flood plain zoning on headwater  
14:30 **SICCARDI, F.**  
Urban development and flood hazard  
14:45 **CORRAL ALEXANDRI, C.**; **SEMPERE TORRES, D.**; **RASO QUINTANA, J.**; **MALGRAT BREGOLAT, P.**  
Use of weather radar for the monitoring of combined sewer overflows in Barcelona area  
15:00 **MENDICINO, G.**; **VERSACE, P.**  
An integrated system for monitoring and emergency management of floods  
15:15 **BONI, G.**; **CAVALLO, A.**; **FERRARIS, L.**; **GOLLO, P.**; **ROMAIRONE, A.**; **VERSACE, C.**  
The experience of the Liguria region in the extreme events management  
15:30 **ADLER, M.-J.**; **CORBUS, C.**  
Modelling the maximum probable flood in a large Romanian river  
15:45 **LLASAT, M.-C.**; **MONTES, J.-M.**  
Convective rainfall mapping and their relationship with floods in Catalonia (Spain)  
16:00 **LAMB, R.**; **CALVER, A.**  
Effects of rainfall data quality on flood frequencies in simulated streamflow  
16:15 **LAIME, S.**; **DAUTREBANDE, S.**  
Model and spatial database to assess design peak flow rates in the Walloon region (Belgium)  
16:30 **BOVO, S.**; **ROSSINO, M.**; **RAVA, M.**  
The natural risk situation hall (Oral + Video)  
16:45 **STELLING, G.S.**; **KERNKAMP, H.W.J.**; **LAGUZZI, M.M.**  
Delft flooding system: two-dimensional hydrodynamic flooding simulation. A powerful tool for landscape planning and risk evaluation (Oral + Video)  
17:00 END OF SESSION

Video presentations: Wednesday, 17.30-19.00 in the poster area

## **NH2 Meteorological and hydrological hazards (co-sponsored by HS) .4 Modelling and flood mapping in rural and urban areas - Poster Session**

Convener: Oberlin, G.  
Co-Convener(s): Roth, G.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:30 - 19:00**  
Poster Area: RHODES - NH  
Co-sponsored by: EC/DG XII/Natural Hazard Section, CEMAGREF

NH012 **PAGLIARA, S.**; **MENEGUZZO, F.**  
Inundation model for floodplain analysis

NH013 **BARBERO, S.**; **GIAMPANI, C.**; **RAMASCO, M.**  
Mapping of flood plains, the case of the Sesia river  
NH014 **ZACHARIAS, I.Z.**; **SKOULIKIDIS, N.TH.**  
The flooding problem of Sperchios river basin (Greece). A study, using the numerical model MIKE 11  
NH015 **LAMB, R.**  
Calibration of a rainfall-runoff model used in flood frequency estimation

## **NH2 Meteorological and hydrological hazards (co-sponsored by HS) .5 Shallow landslides and rainfall triggering - Poster Session**

Convener: Sorriso-Valvo, M.  
Co-Convener(s): Versace, P.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Wednesday, 17:30 - 19:00**  
Poster Area: RHODES - NH  
Co-sponsored by: CNR, Universita della Calabria  
Chairperson: Evans, S.G.  
Editors: Sorriso-Valvo, M., Versace, P.

NH016 **VAN BEEK, L.P.H.**; **CAMMERAAT, L.H.**  
NH2.5-012 The effect of land abandonment on soil water redistribution and preferential flowpaths on shallow landslide initiation  
NH017 **CHOWDHURY, R.N.**; **FLENTJE, P.**  
NH2.5-013 Hazard assessment for rainfall-triggered landslides  
NH018 **RULLI, M.C.**; **MENDUNI, G.**; **ROSSO, R.**  
NH2.5-014 Hydrologic thresholds for shallow landslides in mountain watershed: a spatially distributed simulation analysis  
NH019 **GULLA, G.**  
NH2.5-015 Modelling and trigger mechanisms of soil slips  
NH020 **PRESTON, N.J.**  
NH2.5-016 Feedback effects of rainfall-triggered shallow landsliding  
NH021 **GUERRICCHIO, A.**; **PONTE, M.**; **ZIMMARO, S.**  
NH2.5-017 A semi-quantitative approach, by means of the Hudson's matrix, to the interaction of the parameters influencing the debris-flow of the 1996 January in Gimigliano locality (Calabria region) \*

## **NH2 Meteorological and hydrological hazards (co-sponsored by HS) .5 Shallow landslides and rainfall triggering**

Convener: Sorriso-Valvo, M.  
Co-Convener(s): Versace, P.  
**Thursday, 23 April 1998**  
Lecture Room: STUDIO  
Co-sponsored by: CNR, Universita della Calabria  
Chairperson: Evans, S.G.  
Editors: Sorriso-Valvo, M., Versace, P.

14:00 **ALFONSI, P.**; **DURVILLE, J.-L.**  
NH2.5-001 Rockfalls on the N1 highway in La Réunion Island (France): hazard evaluation from rainfall

14:15 **WACHS, D.; WUST, G.H.**  
 NH2.5- The effect of rainfall on landslide triggering in  
 002 northern Israel: an example of slope instability in an  
 active seismic environment

14:30 **STEMBERK, J.; RYBAO, J.; SUCHY, J.**  
 NH2.5- Landslides triggered by the heavy rainfall on July  
 003 1997 in the Czech Republic

14:45 **FOCARDI, A.; FOCARDI, P.; VANNOCCI, P.**  
 NH2.5- Debris flow which occurred in the Apuan Alps  
 004 (Tuscany-Italy) during the rainfall event of 19th June  
 1996

15:00 **EVANS, S.G.; HUNGR, O.**  
 NH2.5- Rainfall-triggered debris avalanches in the mountains  
 005 of British Columbia, Canada

15:15 **CROZIER, M.J.; PRESTON, N.J.; BROOKS, S.**  
 NH2.5- Event-induced changes to landslide triggering thresh-  
 006 olds

15:30 **GLADE, T.**  
 NH2.5- Models of antecedent rainfall and soil water status  
 007 applied to different regions in New Zealand

15:45 **VERSACE, P.; IRITANO, G.; SIRANGELO, B.**  
 NH2.5- Return period associated to rainfall threshold for  
 008 landslide triggering

16:00 **BORGA, M.; FRANK, E.; DALLA FONTANA, G.**  
 NH2.5- Analysis of topographic control on shallow  
 009 landsliding using a quasi-dynamic wetness

16:15 **BROOKS, S.; CROZIER, M.; PRESTON, N.**  
 NH2.5- Regolith evolution and the control of shallow  
 010 translational hillslope failure: use of a 2-dimensional  
 coupled soil hydrology-slope stability model

16:30 **DI GREGORIO, S.; RONGO, R.**  
 NH2.5- **SORRISO-VALVO, M.; SPATARO, W.**  
 011 A cellular automata model of through flow in a  
 porous soil for shallow landslide forecasting

16:45 **VAN BEEK, L.P.H.; CAMMERAAAT, L.H.**  
 NH2.5- The effect of land abandonment on soil water  
 012 redistribution and preferential flowpaths on shallow  
 landslide initiation (Poster)

16:50 **CHOWDHURY, R.N.; FLENTJE, P.**  
 NH2.5- Hazard assessment for rainfall-triggered landslides  
 013 (Poster)

16:55 **RULLI, M.C.; MENDUNI, G.; ROSSO, R.**  
 NH2.5- Hydrologic thresholds for shallow landslides in  
 014 mountain watershed: a spatially distributed simula-  
 tion analysis (Poster)

17:00 **GULLA, G.**  
 NH2.5- Modelling and trigger mechanisms of soil slips  
 015 (Poster)

17:05 **PRESTON, N.J.**  
 NH2.5- Feedback effects of rainfall-triggered shallow  
 016 landsliding (Poster)

17:10 **GUERRICCHIO, A.; PONTE, M.; ZIMMARO, S.**  
 NH2.5- A semi-quantitative approach, by means of the  
 017 Hudson's matrix, to the interaction of the parameters  
 influencing the debris-flow of the 1996 January in  
 Gimigliano locality (Calabria region) \* (Poster)

17:15 **END OF SESSION**

### **NH3 Earthquake risk mitigation (co-sponsored by SE)**

#### **.1 Models and methods in seismic hazard assessment**

Convener: Tsapanos, T.M.  
 Co-Convener(s): Christova, C.V.  
**Monday, 20 April 1998**  
 Lecture Room: R6  
 Chairperson: N.N.

09:00 **WIEMER, S.; WYSS, M.**  
 b-values for estimating recurrence times: average or  
 asperity values? (Solicited Paper)

09:30 **VACCARI, F.; CAZZARO, R.; PANZA, G.F.**  
 From quantitative seismic zoning to the definition of  
 correlation relations between ground motion paramet-  
 ers and macroseismic intensities

09:45 **TSAPANOS, T.M.**  
 A homogeneous Markov model as a pattern for  
 earthquake recurrence in South America

10:00 **ZORAN, M.**  
 An integrated system for seismic risk assessment of  
 Vrancea region - Romania

10:15 **MAIN, I.; IRIVING, D.; MUSSON, R.**  
 Seismotectonic constraints on the maximum credible  
 magnitude using the gamma distribution

10:30 **BREAK**

Chairperson: Afilhado, A.

11:00 **SHABALIN, N.Y.A.; BOROVSKY, M.Y.A.;**  
**TROFIMOV, V.A.; LAUBENBAKH, E.;**  
**MELTCHOUK, B.**  
 Methods for atmo-radiogeochemical monitoring of  
 manifestations of seismo-tectonic hazards

11:15 **DERGACHEV, A.A.; FILINA, A.G.; MUCHNAYA,**  
**V.I.**  
 Natural and technogenic seismicity aspects for  
 Kuznetsk basin of Altay-Sayan folded region

11:30 **OGATA, Y.**  
 Modelling of aftershocks and relative quiescence as  
 a precursor to a large earthquake (Solicited Paper) \*

12:00 **MÖRNER, N.-A.**  
 Swedish paleoseismicity and varve dating

12:15 **QIN, C.Y.; PAPADIMITRIOU, E.E.;**  
**PAPAZACHOS, B.C.; KARAKAISIS, G.F.**  
 Time dependent seismicity in China

12:30 **PEREZ, O.J.**  
 Revised world seismicity catalog (1950-1997) for  
 strong ( $M_s \geq 6$ ) shallow ( $h \leq 70$  km) earthquakes

12:45 **RADULIAN, M.; MANDRESCU, N.; VACCARI,**  
**F.; PANZA, G.F.**  
 Deterministic seismic hazard assessment of Romania

13:00 **DRENNOV, A.F.**  
 Experimental determination of resonance frequencies  
 of loose sedimentary layer

13:15 **END OF SUB-SESSION**

17:00 **Opening/19:30 Reception**

### NH3 Earthquake risk mitigation (co-sponsored by SE)

#### .1 Models and methods in seismic hazard assessment - Poster Session

Convener: Tsapanos, T.M.

Co-Convener(s): Christova, C.V.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Tuesday, 17:00 - 19:00

Poster Area: RHODES - NH

- NH059 TSAPANOS, T.M.; CHRISTOVA, C.  
A worldwide seismic hazard assessment
- NH060 AFILHADO, A.; MENDES-VICTOR, L.A.; MARTINS, I.  
Seismic hazards assessment: non parametric tests to isolate seismogenic regions
- NH061 ROGOZHIN, E.V.  
Earthquake recurrence for North Eurasia: the Thenching data
- NH062 SADYKOV, D.; ISTEKOV, K.  
The model of the seismic process and prognosis of the earthquakes
- NH063 KAISER, D.  
Uncertainty in the estimation of seismic hazard and design ground motions for nuclear power plants in Germany
- NH064 BELIAEVA, E.A.; KUZHEVSKIY, B.M.; NECHAEV, O.YU.  
Variations of neutron flux in the low atmosphere and deformations of the Earth crust
- NH065 CHERNOV, YU.K.; SOKOLOV, V.YU.  
Earthquake hazard maps and strong earthquakes: assessments and reality
- NH066 LIECHTI, D.; RUETTENER, E.; EUGSTER, S.; STREIT, R.  
The impacat of b value uncertainty on loss estimation in the reinsurance industry
- NH067 TSAPANOS, T.M.  
Estimation of earthquake hazard parameters in the South America area

### NH3 Earthquake risk mitigation (co-sponsored by SE)

#### .2 Seismic hazard evaluation in high seismicity areas by observing precursory phenomena

Convener: Contadakis, M.E.

Co-Convener(s): Zschau, J.

Wednesday, 22 April 1998

Lecture Room: R6

Co-sponsored by: Dept. of Surveying and Geodesy, University of Thessaloniki, GeoForschungsZentrum Potsdam

Chairperson: Contadakis, M.E.

- 08:30 WYSS, M.; WIEMER, S.  
Seismic quiescence is similar to fore- and aftershocks (Solicited Paper)
- 09:00 HASSOUP, A.; ZSCHAU, J.; WELLE, W.  
Seismic-quiescence precursor of earthquake activities in Aswan and Gulf of Aqaba regions as estimated by the Seismolap method
- 09:15 CHOULIARAS, G.; STAVRAKAKIS, G.; ZSCHAU, J.  
Detecting precursory seismic quiescene in Greece using the SEISMOLAP method

- 09:30 CHRISTOVA, C.; NIKOLOVA, S.B.; VENEDIKOV, A.  
Study of seismicity in Greece and the adjacent areas by the SEISMOLAP method
- 09:45 PAPADOPOULOS, G.; DRAKATOS, G.  
A time clustering of strong earthquakes in Greece during October-November 997
- 10:00 PAPADOPOULOS, G.A.  
Successful prediction of the large 18 November 1997 Ionian Sea earthquake
- 10:15 EVISON, F.F.; RHOADES, D.A.  
Precursory swarms, quarms, and mainshock hazard
- 10:30 STEFANSSON, R.  
Ananlysis of Icelandic earthquake precursors in the Prenlab project
- 10:45 MIYAZAKI, S.-I.; YARAI, H.; HASHIMOTO, M.  
Crustal deformation study of Japan by utilizing GSI's dense GPS array
- 11:00 PAVLIS, E.C.; MERTIKAS, S.; KARALIOTIS, A.; FRANTZIS, X.; MBARTZOS, E.  
Seismic hazard monitoring with CRETE: Crete REgional Tectonic Experiment
- 11:15 BREVDO, L.  
Resonant disturbances in a homogeneous elastic waveguide and earthquake prediction
- 11:30 ISHII, H.  
Anomalous preseismic strain and tilt preceding earthquake swarm off Izu Peninsula in Japan. Results observed by multi-component borehole instruments (Poster)
- 11:35 FUJIMORI, K.; ISHII, H.; MUKAI, A.; NAKAO, S.; MATSUMOTO, S.; HIRATA, Y.  
Strain and tilt changes observed in the 800 m borehole near the Nojima fault in Awaji Island, Japan (Poster)
- 11:40 FUJIMORI, K.; YAMAMOTO, T.; OTSUKA, S.; OMURA, M.; TANAKA, Y.; ISHII, H.  
Crustal movements observed in the focal region before and after the 1995 Hyogo-Ken Nanbu earthquake ( $M = 7.2$ ) (Poster)
- 11:45 ALEKSEEV, A.S.  
An "boundary dilatancy layers" and their influence on the relation between geophysical anomalies-precursors of different nature (Poster)
- 11:50 GLINSKY, B.M.  
Investigation of tensely-deformed state in high seismicity areas using vibroseismic sources (Poster)
- 11:55 LUNCH
- 12:00 Business Meetings

Chairperson: Zschau, J.

- 14:00 CUOMO, V.; DI BELLO, G.; LAPENNA, V.; PISCITELLI, S.; PATELLA, D.; PAPARO, G.; MARSON, I.  
Observational evidences of geoelectrical and seismoacoustic signals possible related to seismic activity on southern Apennine Chain (Italy)
- 14:15 NAZAREVYCH, A.V.; NAZAREVYCH, L.YE.  
Parametric seismogeacoustic monitoring of seismotectonic processes and earthquake prediction in the Ukrainian Transcarpathians (Poster)
- 14:20 TZANIS, A.; VALLIANATOS, F.  
'Moving charged dislocation modelling' of electrical earthquake precursors: a promising approach?

- 14:35 MIKHAILOV, YU.M.; MIKHAILOVA, G.A.; KAPUSTINA, O.V.  
ELF and VLF electromagnetic background in outer ionosphere over European seismoactive regions
- 14:50 POGOSSIAN, A.  
Phenomena of leap-type alterations revealed by slope sounding of ionosphere (Poster)
- 14:55 PULINETS, S.A.; HEGAI, V.V.; BOYARCHUK, K.A.; ALEKSEEV, V.A.  
The new conception of earthquakes prediction
- 15:10 CONTADAKIS, M.E.; ASTERIADIS, G.  
Research for geohydrological seismic precursory phenomena in Greece
- 15:25 OUTKIN, V.; YURKOV, A.; KRIVASHEEV, S.; KING, C.-Y.  
Radon-exhalation dynamics for predicting tectonic earthquakes (Poster)
- 15:30 IGOUMNOV, V.; STEPANIAN, Z.  
The geochemical variations connected with the Spitak earthquake, Armenia
- 15:45 HATA, M.; TAKUMI, I.; YABASHI, S.  
A model of earthquake seen by electromagnetic observation - gaseous emission from the Earth as main source of pre-seismic electromagnetic precursor and trigger of followed earthquake (Poster)
- 15:50 GULAKYAN, S.Z.  
Analyzing the geochemical information for earthquake prediction (Poster)
- 15:55 SASOROVA, E.V.; LEVIN, B.W.  
Local signs of earthquake preparing and its availabilities
- 16:10 SASOROVA, E.V.  
The software system for the earthquake precursor detection based on the regional monitoring
- 16:25 KLIMOV, S.; GRYGORIAN, O.; JUCHNIEWICZ, J.; KOREPANOV, V.; LISSAKOV, YU.; PARROT, M.; POKHOTILOV, O.; RODIN, V.; CHERNJAVSKI, A.  
The survey of antropogenic and geophysical electromagnetic perturbation by use the micro satellite integrated in the ISS infrastructure
- 16:40 HAINZL, S.; ZÖLLER, G.; KURTHS, J.  
Self-organization of quiescence, foreshocks and aftershocks
- 16:55 ZÖLLER, G.; HAINZL, S.; KURTHS, J.  
Using spatiotemporal surrogate data to quantify seismic quiescence
- 17:10 KOREPANOV, V.; DOUDKIN, F.  
Comparative analysis of techniques used for earthquake electromagnetic precursors study
- 17:25 DI GIOVAMBATTISTA, R.; TYUPKIN, YU.  
RTL prognostic parameter: application to the study of seismicity of Italy (Poster)
- 17:30 END OF SESSION

### NH3 Earthquake risk mitigation (co-sponsored by SE)

#### .2 Seismic hazard evaluation in high seismicity areas by observing precursory phenomena - Poster Session

Convener: Contadakis, M.E.  
Co-Convener(s): Zschau, J.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: RHODES - NH  
Co-sponsored by: Dept. of Surveying and Geodesy, University of Thessaloniki, GeoForschungsZentrum Potsdam  
Chairperson: Hata, M.

- NH071 ISHII, H.  
Anomalous preseismic strain and tilt preceding earthquake swarm off Izu Peninsula in Japan. Results observed by multi-component borehole instruments
- NH072 FUJIMORI, K.; ISHII, H.; MUKAI, A.; NAKAO, S.; MATSUMOTO, S.; HIRATA, Y.  
Strain and tilt changes observed in the 800 m borehole near the Nojima fault in Awaji Island, Japan
- NH073 FUJIMORI, K.; YAMAMOTO, T.; OTSUKA, S.; OMURA, M.; TANAKA, Y.; ISHII, H.  
Crustal movements observed in the focal region before and after the 1995 Hyogo-Ken Nanbu earthquake (M = 7.2)
- NH074 ALEKSEEV, A.S.  
An "boundary dilatancy layers" and their influence on the relation between geophysical anomalies-precursors of different nature
- NH075 GLINSKY, B.M.  
Investigation of tensely-deformed state in high seismicity areas using vibroseismic sources
- NH077 NAZAREVYCH, A.V.; NAZAREVYCH, L.YE.  
Parametric seismogeoaoustic monitoring of seismotectonic processes and earthquake prediction in the Ukrainian Transcarpathians
- NH078 POGOSSIAN, A.  
Phenomena of leap-type alterations revealed by slope sounding of ionosphere
- NH079 OUTKIN, V.; YURKOV, A.; KRIVASHEEV, S.; KING, C.-Y.  
Radon-exhalation dynamics for predicting tectonic earthquakes
- NH080 HATA, M.; TAKUMI, I.; YABASHI, S.  
A model of earthquake seen by electromagnetic observation - gaseous emission from the Earth as main source of pre-seismic electromagnetic precursor and trigger of followed earthquake
- NH081 GULAKYAN, S.Z.  
Analyzing the geochemical information for earthquake prediction
- NH081A DI GIOVAMBATTISTA, R.; TYUPKIN, YU.  
RTL prognostic parameter: application to the study of seismicity of Italy





**NH3 Earthquake risk mitigation (co-sponsored by SE)**  
**.3 Macroseismics: present state of intensity-assessment procedures and future perspectives**

Convener: Tertulliani, A.  
 Co-Convener(s): Cecic, I.  
**Thursday, 23 April 1998**  
 Lecture Room: R6  
 Chairpersons: Tertulliani, A.; Cecic, I.  
 Editors: Tertulliani, A., Cecic, I.

- 09:00 EMS WORKING GROUP; STUCCHI, M.  
 NH3.3-001 Testing the European macroseismic scale in the case of the 1997, central Italy earthquakes (Solicited Paper)  
 09:30 CAMASSI, R.; MONACHESI, G.; MOLIN, D.  
 NH3.3-002 Macroseismic survey of the central Apennines earthquakes of September-October 1997  
 09:45 DE RUBEIS, V.; GASPARINI, C.;  
 NH3.3-003 TERTULLIANI, A.; TOSI, P.  
 Preliminary results of the macroseismic survey of the Colfiorito sequence (central Italy)  
 10:00 KOUSKOUNA, V.; MAKROPOULOS, K.C.  
 NH3.3-005 Macroseismic investigation of some pre- and instrumental period events from the Gulf of Corinth  
 10:15 ZIVCIC, M.; CECIC, I.  
 NH3.3-006 Revised magnitudes of historical earthquakes in Slovenia  
 10:30 END OF SUB-SESSION

**NH3 Earthquake risk mitigation (co-sponsored by SE)**  
**.3 Macroseismics: present state of intensity-assessment procedures and future perspectives - Poster Session**

Convener: Tertulliani, A.  
 Co-Convener(s): Cecic, I.  
 Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
 Poster Area: RHODES - NH  
 Chairpersons: Levret, A.; Kouskouna, V.  
 Editors: Tertulliani, A., Cecic, I.

- NH082 ALBARELLO, D.; MUCCIARELLI, M.;  
 NH3.3-007 D'AMICO, V.  
 Seismic hazard estimates from felt intensities at the sites shaken from the 1997 central Italy earthquake  
 NH083 BARBANO, M.S.; CECIC, I.  
 NH3.3-008 The use of the EMS-1992 scale in the field work: examples from the central Italy, September - October 1997  
 NH084 CIFELLI, F.; DONATI, S.; FUNICIELLO, F.  
 NH3.3-009 Distribution of effects in the urban area of Rome, for the October 14, 1997 (central Italy) event  
 NH085 RIGUZZI, F.  
 NH3.3-010 Intensity vs catalogues: the case of the 1975, June 19 Gargano (southern Italy) earthquake  
 NH086 CECIC, I.; SOVIC, I.; ZIVCIC, M.  
 NH3.3-011 The Zagreb 1502 earthquake - doubtful or even fake?  
 NH087 LEVRET, A.; SCOTTI, O.  
 NH3.3-012 Verification of macroseismic methods on two M=5.2 instrumental earthquakes in France

- NH088 SOVIC, I.  
 NH3.3-013 Croatian macroseismic database  
 NH089 GUTDEUTSCH, R.; LENHARDT, W.  
 NH3.3-014 The method of comparison earthquakes - a tool of parametrisation historical earthquakes  
 NH090 VANNUCCI, G.; GASPERINI, P.; FERRARI, G.; GUIDOBONI, E.  
 NH3.3-015 A fuzzy system to assess seismic intensity  
 NH091 BAPTISTA, M.A.; MIRANDA, J.M.; MENDES VICTOR, L.  
 NH3.3-016 A new attenuation law for the 1755.01.11 Lisbon earthquake  
 NH092 MUSSON, R.M.W.; HENNI, P.H.O.  
 NH3.3-017 From questionnaires to intensities - assessing free-form macroseismic data in the UK  
 NH093 PAULA, A.; OLIVEIRA, C.S.  
 NH3.3-018 Strategies for the use of macroseismic information in the study of ground response to seismic excitation  
 NH094 D'AMICO, V.; ALBARELLO, D.; MANTOVANI, E.  
 NH3.3-019 A distribution-free analysis of the magnitude-intensity relationships: an application to the Mediterranean region  
 NH095 SOKOLOV, V.YU.; CHERNOV, YU.K.  
 NH3.3-020 Correlation of seismic intensity with Fourier acceleration spectra

**NH3 Earthquake risk mitigation (co-sponsored by SE)**  
**.4 Active fault and earthquake risk mitigation**

Convener: Barka, A.A.  
 Co-Convener(s): Stewart, I.S.  
**Monday, 20 April 1998**  
 Lecture Room: R6  
 Chairperson: Stewart, I.S.

- 14:00 TRIFONOV, V.G.; IVANOVA, T.P.  
 Seismic hazard assessment by using active fault data (Solicited Paper)  
 14:30 GASPERINI, P.; BERNARDINI, F.; VALENSISE, G.; BOSCHI, E.  
 Defining seismogenic sources from historical earthquake felt reports  
 14:45 ROGNVALDSSON, S.TH.; SLUNGA, R.  
 Mapping subsurface faults using relative locations and fault plane solutions of microearthquakes  
 15:00 DE MARTINI, P.M.; BURRATO, P.; VALENSISE, G.  
 Active tectonic structures in the Padana Plain: new discrimination strategy from a joint study of geomorphic and geodetic leveling data  
 15:15 ANGELIER, J.; CHU, H.-T.; HU, J.-C.; LEE, J.-C.  
 Fault kinematics and earthquake risk: Chihshang, Taiwan  
 15:30 MEGHRAOUI, M.  
 Fault-fragments and related active deformation: implications for the seismic hazard assessment (Solicited Paper)  
 16:00 VITTORI, E.; AZZARO, R.; FERRELLI, L.; MICHETTI, A.M.; SERVA, L.  
 Paleoseismological investigations along the Moscarello Fault, Mt. Etna volcano (Sicily)

- 16:15 **NOSTRO, C.; STEIN, R.S.; COCCO, M.; BELARDINELLI, M.E.; MARZOCCHI, W.**  
Two-way coupling between eruptions at Vesuvius and southern Apennine earthquakes by elastic stress transfer
- 16:30 **BARKA, A.; NALBANT, S.; HUBERT, A.; KING, G.**  
Coulomb modelling of Marmara Sea earthquakes since 1700: implications on the earthquake hazard of the Istanbul region
- 16:45 **ERDIK, M.; SESETYAN, K.**  
Seismic hazards in the Caucasus region
- 17:00 **BARKA, A.; STEWART, I.**  
Concluding remarks
- 17:15 **END OF SUB-SESSION**
- 17:00 Opening
- 19:30 Reception

### **NH3 Earthquake risk mitigation (co-sponsored by SE)**

#### **.4 Active fault and earthquake risk mitigation - Poster Session**

Convener: Barka, A.A.  
Co-Convener(s): Stewart, I.S.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Tuesday, 17:00 - 19:00**  
Poster Area: RHODES - NH

- NH068 **AZZARO, R.**  
Earthquake surface faulting in volcanic areas: a case-study from Mount Etna (Sicily)
- NH069 **SULEIMAN, A.; DOSER, D.**  
Seismotectonics and seismic hazard assessment of Libya
- NH070 **KOUTINOV, I.G.; YUDAKHIN, F.N.; BELENOVICH, T.Y.**  
Non-traditional aspects of seismic hazard in the zone of active faults within the Russian Plate

### **NH3 Earthquake risk mitigation (co-sponsored by SE)**

#### **.5 Landslide hazards in seismically active regions**

Convener: Wasowski, J.  
Co-Convener(s): Del Gaudio, V.  
**Thursday, 23 April 1998**  
Lecture Room: R6  
Chairperson: Jibson, R.W.

- 11:00 **KEEFER, D.K.**  
Occurrence and evaluation of landslides generated by earthquakes (Solicited Paper)
- 11:30 **BEGIN, C.; PERRET, D.**  
Earthquake-induced landslides in Saguenay lowlands (Québec, Canada): impact of the 1663 Charlevoix earthquake
- 11:45 **PAPADOPOULOS, G.**  
Earthquake related landslides in Greece
- 12:00 **WUST, G.H.; WACHS, D.**  
Monitoring aseismic slope activity in northern Israel: a key to the comprehensive assessment of the seismic triggering of landslides

- 12:15 **ARINGOLI, D.; DRAMIS, F.; GENTILI, B.; MATERAZZI, M.; PAMBIANCHI, G.; SCALELLA, G.**  
Earthquake related gravitational phenomena in the Umbro-Marche Apennines (central Italy): the case of the September-November 1997 seismic events
- 12:30 **ESPOSITO, E.; PORFIDO, S.; SIMONELLI, A.L.; IACCARINO, G.; MASTROLORENZO, G.**  
Surface effects induced by the 26.09.97 Umbria-Marche earthquakes
- 12:45 **WASOWSKI, J.; DEL GAUDIO, V.**  
Mass movement and seismic hazard in Caramanico Terme (Italy): some links
- 13:00 **LUNCH**

Chairpersons: Keefer, D.K.; Chowdhury, R.

- 14:00 **JIBSON, R.W.**  
Assessing hazards from seismically triggered landslides: an overview of the state of the art (Solicited Paper + Poster)
- 14:30 **HERMANN, S.**  
Deep-seated gravitational slope deformations (DGSD) as a natural laboratory of brittle rock deformation - implications to rock slope hazards
- 14:45 **TRAUTH, M.H.; MÜLLER, A.B.; STRECKER, M.R.**  
The role of climate as a preparatory or triggering actor in the generation of catastrophic landslides in NW Argentina
- 15:00 **HERMANN, R.M.; STRECKER, M.R.; TRAUTH, M.H.; HASELTON, K.**  
Important boundary conditions controlling rock-avalanche distribution in semi-arid NW Argentina
- 15:15 **HASELTON, K.; HERMANN, R.; BOOKHAGEN, B.; STRECKER, M.**  
Development of a landslide hazard map for north-west Argentina
- 15:30 **FINZI-CONTINI, G.**  
Large Apennine landslides along Italian Adriatic foredeep studies by L-transforms (Visco-Elastic domain)
- 15:45 **ROMEO, R.**  
Earthquake-induced ground failures in Italy
- 16:00 **LUZI, L.; PERGALANI, F.; BRUNI, F.; TERLIEN, M.T.J.**  
Hybrid probabilistic-deterministic approach for mapping landslide vulnerability to earthquakes using GIS techniques
- 16:15 **PARISE, M.; JIBSON, R.W.**  
A seismic landslide susceptibility rating of geologic units based on analysis of characteristics of landslides triggered by the January 17, 1994, Northridge, California, earthquake
- 16:30 **KRISHNA, A.P.**  
Landslide hazard management and prediction options: some strategies for the Sikkim Himalaya, India
- 16:45 **BASHELEISHVILI, L.**  
Genesis of the seismodislocations in the epicenter of the Racha earthquake
- 17:00 **WASOWSKI, J.**  
Poster session introduction and closing comments
- 17:15 **END OF SUB-SESSION**

**NH3 Earthquake risk mitigation (co-sponsored by SE)**  
**.5 Landslide hazards in seismically active regions - Poster Session**

Convener: Wasowski, J.  
 Co-Convener(s): Del Gaudio, V.  
 Display Time: Monday, 09:00 - Friday, 13:00  
 Authors in Attendance: Thursday, 17:30 - 19:00  
 Poster Area: RHODES - NH  
 Chairpersons: Wasowski, J.; Del Gaudio, V.

- NH031 JIBSON, R.W.  
 Assessing hazards from seismically triggered landslides: an overview of the state of the art (Solicited Paper + Poster)
- NH032 SKARYATIN, V.D.; MAKAROVA, M.G.; ZENGINA, T.J.; NIKITIN, M.J.  
 Studying the slope-processes in seismic-active regions with the help of remote sensing
- NH033 MÜLLER, A.B.; TRAUTH, M.H.; STRECKER, M.R.  
 Climate-triggered variations in diatom assemblages in a pleistocene landslide-dammed lake in the Valles Calchaquies, NW Argentina (26°S, 66°W)
- NH034 BOOKHAGEN, B.; HASELTON, K.; TRAUTH, M.H.  
 Water balance model of a landslide-dammed lake in the Andes of NW Argentina (26°S, 66°W)
- NH035 ADORNI, G.; NICOLETTI, P.G.; PARISE, M.; SCALZO, A.  
 Reconnaissance and description of landslide dams of seismic origin in south-eastern Sicily
- NH036 VANBRABANT, F.; FLEURISSEON, J.A.  
 Influence of the topographic amplifications under dynamic loading on the slope stability
- NH037 DAYU, G.  
 Applications of geophysical survey in geological hazard mitigation in P.R. China
- NH038 CASTALDINI, D.; PANIZZA, M.  
 Earthquake-induced landslide hazard assessment in the northern Apennines (Italy)
- NH039 ROMEO, R.  
 Seismically induced landslide displacements: a predictive model
- NH040 CHOWDHURY, R.N.; FLENTJE, P.  
 Spatial hazard assessment for landslides under seismic conditions
- NH041 KOUKIS, G.; NIKOLAOU, N.  
 Inventory and classification of landslide phenomena at a seismically active region (NE part of Korinthos county, Greece)
- NH042 GUERRICCHIO, A.; RONCONI, M.L.  
 Large landslides reactivated by 1783 earthquake in the Catena Costiera of Calabria (S. Lucido, Italy) \*
- NH042A BOZZANO, F.; GAMBINO, P.; PRESTININZI, A.; ROMEO, R.; SCARASCIA MUGNOZZA, G.; VALENTINI, G.  
 Ground effects induced by the Umbria-Marche earthquakes of September-October 1997 (central Italy) \*

---

**Attend the Poster Session**

---

**NH3 Earthquake risk mitigation (co-sponsored by SE)**  
**.6 Efficiency of building codes in the mitigation of the vulnerability**

Convener: Petrini, V.  
 Co-Convener(s): Pujades Beneit, L.G.  
 Tuesday, 21 April 1998  
 Lecture Room: R6  
 Chairperson: N.N.

- 14:00 CASELLES, J.O.; ESPINOZA, F.; PUJADES, L.G.; CANAS, J.A.; CLAPES, J.  
 Empirical determination of Barcelona's buildings natural periods by using background cultural noise
- 14:15 SOUSA OLIVEIRA, C.  
 Natural frequencies of structures based on simplified in situ measurements
- 14:30 SOUSA, M.L.; CAMPOS-COSTA, A.; SOUSA OLIVEIRA, C.  
 Comparison of losses before and after seismic resistant code: application to an urban area
- 14:45 MENA, U.; PUJADES, L.G.; CANAS, J.A.; LOPEZ-ALMANSA, F.  
 Seismic risk studies in Barcelona, Spain
- 15:00 SOKOLOV, V.YU.  
 Probabilistic approach to building code construction
- 15:15 END OF SUB-SESSION

**NH3 Earthquake risk mitigation (co-sponsored by SE)**  
**.7 Seismic microzonation in urban areas - Poster Session**

Convener: Roca, A.  
 Co-Convener(s): Oliveira, C.S.  
 Display Time: Monday, 09:00 - Friday, 13:00  
 Authors in Attendance: Thursday, 17:00 - 19:00  
 Poster Area: RHODES - NH  
 Editors: Roca, A.; Oliveira, C.S.

- NH096 TEVES-COSTA, P.; MOITINHO, I.; LOPES, I.  
 NH3.7-016 Microzonation of the Lisbon town: a theoretical approach
- NH097 LAZARO, R.; PINTO, V.; RIVERO, L.; ROCA, J.L.; CASAS, A.  
 NH3.7-017 Gravity anomaly map of Barcelona as a tool for determining the structural framework and depth to basement in relation to seismic microzonation of an urban area
- NH098 ALFARO, A.; GOULA, X.; SUSAGNA, T.; PUJADES, L.G.; NAVARRO, M.; SANCHEZ, J.; CANAS, J.A.  
 NH3.7-018 Preliminary map of soil predominant periods in Barcelona using microtremors
- NH099 CID, J.; SUSAGNA, T.; GOULA, X.; CHAVARRIA, L.; FIGUERAS, S.; FLETA, J.; CASAS, A.; ROCA, A.  
 NH3.7-019 Seismic zonation of Barcelona based in preliminary site specific response spectra
- NH100 UMBRIA-MARCHE SITE EFFECT GROUP (UMSEG), MARSON, P.  
 NH3.7-020 Experimental site effect evaluation in urban areas of the Umbria and Marche regions (Italy)
- NH101 SOKOLOV, V.YU.; CHERNOV, YU.K.  
 NH3.7-021 Probabilistic microzonation of urban territories

- NH102 BOCCALETTI, M.; CORTI, G.; GASPERINI, P.; **PICCARDI, L.**; VANNI DESIDERI, A.; VANNINI, G.; VANNUCCI, G.; CLEMENTE, S.  
NH3.7-022  
Seismic zonation and active tectonics of the urban area of Florence (Italy)
- NH103 ENOMOTO, T.; NAVARRO, M.; SANCHEZ, F.J.; VIDAL, F.; SEO, K.; LUZON, F.  
NH3.7-023  
Application of dynamic response analysis of buildings for the seismic risk assessment in Almeria city

### NH3 Earthquake risk mitigation (co-sponsored by SE) .7 Seismic microzonation in urban areas

Convener: Roca, A.  
Co-Convener(s): Oliveira, C.S.  
**Friday, 24 April 1998**  
Lecture Room: R6  
Chairperson: Oliveira, C.S.  
Editors: Roca, A.; Oliveira, C.S.

- 08:30 EUROSEISMOD GROUP; **BARD, P.-Y.**  
NH3.7-001  
EUROSEISMOD lessons for microzonation studies (Solicited Paper)
- 09:00 **DIAGOURTAS, D.**; TZANIS, A.; MAKROPOULOS, K.  
NH3.7-002  
Comparative study of microtremor analysis methods
- 09:15 UGALDE, A.; EGOZCUE, J.J.; ALFARO, A.; PUJADES, L.G.; CANAS, J.A.  
NH3.7-003  
Estimation of the system function of soils using microtremors
- 09:30 **NAVARRO, M.**; SANCHEZ, F.J.; ENOMOTO, T.; MATSUDA, I.; VIDAL, F.; SEO, K.; POSADAS, A.J.  
NH3.7-004  
Detailed seismic microzonation of Almeria city using geotechnical information and microtremor observations
- 09:45 **TRIANTAFYLIDIS, P.**; HATZIDIMITRIOU, P.; THEODOULIDIS, N.; SUHADOLC, P.; PAPAACHOS, C.; RAPAKIS, D.  
NH3.7-005  
Site effects in the city of Thessaloniki (Greece): estimates from data and modelling
- 10:00 **LE BRUN, B.**; HATZFELD, D.; BARD, P.-Y.  
NH3.7-006  
Seismic microzonation in Grenoble (France)
- 10:15 **DUVAL, A.-M.**, MENEROUD, J.-P.; SINGER, A.; FUNVISIS TECHNICAL MEMBERS  
NH3.7-007  
Caracas (Venezuela) site effect determination with microtremor
- 10:30 BREAK

Chairperson: Roca, A.  
Editors: Roca, A.; Oliveira, C.S.

- 10:45 **DUVAL, A.-M.**; SEMBLAT, J.-F.; MENEROUD, J.-P.  
NH3.7-008  
Site effect determination in Nice, France (Gemitis project)
- 11:00 UGALDE, A.; PUJADES, L.G.; CANAS, J.A.  
NH3.7-009  
Microtremor analysis to characterise seismic wave attenuation in the city of Barcelona
- 11:15 **MARRARA, F.**; SUHADOLC, P.  
NH3.7-010  
Evaluation of site effects in Volvi Basin (Greece) from experimental data and modelling

- 11:30 BELLUCCI, F.; **CASERTA, A.**; CULTRERA, G.; DONATI, S.; MARRA, F.; MELE, G.; PALOMBO, B.; ROVELLI, A.  
NH3.7-011  
Study of site effects in the area of Nocera Umbra (central Italy) during the 1997 Umbria-Marche seismic sequence
- 11:45 **MOLDOVEANU, C.L.**; PANZA, G.F.  
NH3.7-012  
2-D strong motion simulation for microzonation of Bucharest
- 12:00 OLIVEIRA, C.S.; CORREIA GUEDES, J.H.; LUCAS, A.  
NH3.7-013  
The earthquake sequence of events during June-October 1997 crisis in the Azores observed under different soil conditions
- 12:15 **FÄH, D.**; NOACK, T.  
NH3.7-014  
The influence of the experts opinion on microzonation studies
- 12:30 PANZA, G.F.  
NH3.7-015  
Realistic modelling of seismic input in urban areas: a UNESCO/IGCP project (Solicited Paper)
- 13:00 LUNCH

Chairperson: Roca, A.

- 14:00 Discussion  
16:00 END OF SESSION

### NH4 Volcanic hazards: field studies, instrumentation and observation networks (co-sponsored by SE) - Poster Session

Convener: Kilburn, C.  
Co-Convener(s): Vougioukalakis, G.  
Display Time: Monday, 09:00 - Friday, 13:00  
**Authors in Attendance: Thursday, 17:00 - 19:00**  
Poster Area: RHODES - NH

- NH043 **ACHILLI, V.**; AL-BAYARI, O.; ARTESE, G.; BORGSTROM, S.; CAPONE, M.; COPPA, U.; DEL GAUDIO, C.; GANDOLFI, S.; MACCHIAVELLI, N.; RICCO, C.; SEPE, V.; VETTORE, A.; AST, A.L.  
GPS measurements in the Neapolitan volcanic area
- NH044 **BALDI, P.**; **MARSELLA, M.**; VITTUARI, L.  
GPS and digital photogrammetry for monitoring ground deformations on a volcanic area
- NH045 **PINGUE, F.**; OBRIZZO, F.; TROISE, C.; BERRINO, G.; DE NATALE, G.; CAPUANO, P.; ESPOSITO, T.; TAMMARO, U.; DE LUCA, G.; SCARPA, R.; CORRADO, G.  
Ground deformation monitoring at Somma-Vesuvius and Campanian volcanic area (Italy)
- NH046 **FINIZOLA, A.**; RAMOS, D.; MACEDO, O.  
Self-potential studies of hydrothermal systems and structure on Mistit and Ubina volcanoes, S. Peru
- NH047 **ZIMMER, M.**; ERZINGER, J.  
Gas chemical studies at Merapi volcano, Indonesia

### Attend the Business Meeting of your Section

on Wednesday, 22 April, 12.00-14.00, Lecture Room R1

## NH4 Volcanic hazards: field studies, instrumentation and observation networks (co-sponsored by SE)

Convener: Kilburn, C.

Co-Convener(s): Vougioukalakis, G.

Friday, 24 April 1998

Lecture Room: STUDIO

Chairperson: N.N.

- 09:00 **MCGUIRE, W.J.**; **MOSS, J.L.**  
Geodetic monitoring of dyke emplacement, slope instability, and fault creep at Mount Etna
- 09:15 **BUDETTA, G.**; **CARBONE, D.**; **GRECO, F.**  
Subsurface mass redistribution detected by micro-gravity studies at Mt. Etna, 1995-1996
- 09:30 **DEL NEGRO, C.**; **FERRUCCI, F.**; **NAPOLI, R.**  
Geomagnetic prediction of volcanic eruptions
- 09:45 **LEONARDI, S.**; **GRESTA, S.**; **MULARGIA, F.**  
Cross-correlation between volcanic tremor and SO<sub>2</sub> flux data from Mt. Etna volcano
- 10:00 **DE RUBEIS, V.**; **TOSI, P.**; **BARBANO, M.S.**; **VINCIGUERRA, S.**  
Time and spatial clustering of Etnean seismicity, 1981-1991
- 10:15 **MULARGIA, F.**  
Retrospective identification of phenomena correlated with volcanic eruptions
- 10:30 BREAK

Chairperson: N.N.

- 11:00 **PRIVITERA, E.**; **ARMADILLO, E.**; **BONACCORSO, A.**; **BOZZO, E.**; **CAPRA, A.**; **CANEVA, G.**; **FALZONE, G.**; **FERRACCIOLI, F.**; **GRESTA, S.**; **REIANO, D.**; **MT. BELBOURNE GEOPHYSICAL GROUP**  
An integrated monitoring project for the modelling of Mt. Melbourne volcano internal dynamics (Antarctica)
- 11:15 **ACHILLI, V.**; **AL-BAYARI, O.**; **ARTESE, G.**; **BORGSTROM, S.**; **CAPONE, M.**; **COPPA, U.**; **DEL GAUDIO, C.**; **GANDOLFI, S.**; **MACCHIAVELLI, N.**; **RICCO, C.**; **SEPE, V.**; **VETTORE, A.**; **AST, A.L.**  
GPS measurements in the Neapolitan volcanic area
- 11:30 **MATTIOLI, G.S.**; **DIXON, T.H.**; **FARINA, F.**; **HOWELL, E.S.**; **JANSMA, P.**; **SMITH, A.L.**  
Development of a mixed-mode GPS geodetic network at Soufriere Hills volcano, Montserrat
- 11:45 **REBSCHER, D.**; **WESTERHAUS, M.**; **WELLE, W.**; **NANDAKA, I.G.M.A.**  
Monitoring ground deformation at the decade volcano Gunung Merapi, Indonesia
- 12:00 **BERRINO, G.**; **CORRADO, G.**; **MAGLIULO, R.**; **RICCARDI, U.**  
Continuous gravity record at Mount Vesuvius: a tool to monitor its dynamics
- 12:15 **BONVALOT, S.**; **DIAMENT, M.**; **DEPLUS, C.**; **GABALDA, G.**; **STAUDACHER, T.**  
Microgravity monitoring of Piton de la Fournaise volcano (La Réunion)
- 12:30 **FALLER, J.E.**; **VITOUCHKINE, A.**  
New gravity sensors as probes of volcanic activity

- 12:45 **LA ROCCA, M.**; **PETROSINO, S.**; **SACCOROTTI, G.**; **SIMINI, M.**; **IBANEZ, J.**; **ALMENDROS, J.**; **DEL PEZZO, E.**

Location of the source and shallow velocity model deduced from the explosion quakes recorded by two seismic antennas at Stromboli volcano

13:00 LUNCH

Chairperson: N.N.

- 14:00 **ROSATELLI, G.**; **JONES, A.P.**  
Petrological triggers to volcanic eruptions: silicate-carbonate magma unmixing
- 14:15 **SULPIZIO, R.**; **DI VITO, M.A.**; **ZANCHETTA, G.**  
Landscape response to the deposition of airfall pyroclastics from large explosive eruptions: an example from the Campanian area (southern Italy)
- 14:30 **DAY, S.J.**; **CARRACEDO, J.C.**  
Kinematics and mechanics of lateral collapses on oceanic island volcanoes, and their efficiency as tsunami sources
- 14:45 **MANGENEY, A.**; **HEINRICH, P.**; **ROCHE, R.**; **GUIBOURG, S.**; **BOUDON, G.**; **CHEMINEE, J.L.**  
Numerical simulation of a potential debris avalanche in Montserrat, lesser Antilles
- 15:00 **AGUIRRE-DIAZ, G.J.**; **FERRARI, L.**; **LABARTHE-HERNANDEZ, G.**  
The source paradigm of the voluminous ignimbrites of the Sierra Madre Occidental, Mexico
- 15:15 **CIONI, R.**; **GURIOLI, L.**; **SBRANA, A.**; **VOUGIOUKALAKIS, G.**  
Precursors to the plinian eruptions of Thera (1628 BC) and Vesuvius (79 AD): data from archaeological sites
- 15:30 BREAK

Chairperson: N.N.

- 16:00 **PAPADOPOULOS, G.**; **SACHPAZI, M.**; **PANAPOULOU, G.**; **STAVRAKAKIS, G.**  
The volcanoseismic crisis of 1996-1997 in Nisyros, SE Aegean Sea, Greece
- 16:15 **LONGO, A.**; **NERI, A.**; **ROSI, M.**; **MACEDONIO, G.**  
Pyroclastic flow hazard in the maximum expected event at Campi Flegrei (Italy)
- 16:30 **SORENSEN, S.-A.**  
Risk evaluation with stochastic models of lava flows
- 16:45 Concluding Remarks
- 17:00 END OF SESSION

## NH5 Geomorphological hazards: extent, evaluation and mapping techniques

Convener: Guzzetti, F.

Co-Convener(s): Allison, R.J.

Thursday, 23 April 1998

Lecture Room: STUDIO

Chairperson: Guzzetti, F.

- 09:00 **HERVAS, J.**; **ROSIN, P.L.**  
Semi-automatic texture segmentation of remotely sensed imagery for landslide hazard assessment
- 09:15 **KUBOTA, T.**  
Analysis of slope gradient antecedent to landslide for primarily slide susceptibility mappings

- 09:30 HUNGR, O.  
Elements of risk mapping for rapid landslides
- 09:45 ARATTANO, M.; GRATTONI, P.; MARCHI, L.  
Mesurement of debris flow surface velocity based on image processing techniques
- 10:00 MASSARI, R.; ATKINSON, P.M.  
Modelling the influence of vegetation clearance in the occurrence of shallow landslides
- 10:15 BREAK

Chairperson: Guzzetti, F.

- 11:00 OJEDA, G.  
Geomorphological survey and GIS techniques as a toll for predictive erosion mapping
- 11:15 OLIVERI, S.; BRUNORI, C.A.; GIARDINO, C.; LUZI, L.; PEPE, M.; ZILIOLI, E.  
Indirect evaluation of erosion using DEM and remote sensing techniques
- 11:30 MEYER, A.; MARTINEZ-CASASNOVAS, J.A.  
Modelling the probability of gully development in vineyard parcels
- 11:45 BECCHI, I.; CAPORALI, E.; CAPARRINI, F.; PROFETI, G.  
Remote sensing to evaluate soil hydrological status in the Arno basin, Italy
- 12:00 CIAVOLA, P.; TESSARI, U.; MANTOVANI, F.; SIMEONI, U.  
Evaluation of floodplain changes and geomorphological mapping of the coastal zone plain of Myzeq (Albania) using Landsat TM imagery
- 12:15 BENVENUTO, F.; MARANI, A.; SILVESTRI, S.  
A new database for environmental risk assessment and hazards prevention in the Venice area
- 12:30 END OF SESSION

#### NH5 Geomorphological hazards: extent, evaluation and mapping techniques - Poster Session

Convener: Guzzetti, F.

Co-Convener(s): Allison, R.J.

Display Time: Monday, 09:00 - Friday, 13:00

Authors in Attendance: Thursday, 17:00 - 19:00

Poster Area: RHODES - NH

Chairperson: Guzzetti, F.

- NH049 PANIZZA, M.; CORSINI, A.; GANDOLFI, M.; MARCHETTI, M.; SOLDATI, M.  
Geomorphological mapping for landslide hazard assessment in the Dolomites (Italy)
- NH050 GONZALEZ DIAZ, E.F.; COSTA, C.H.; GICCARDI, A.D.; FAUQUE, L.E.  
Rock-avalanches as evidences of paleoseismic activity in the Sierras Pampeanas, Argentina
- NH051 COE, J.A.; GODT, J.W.; PARISE, M.  
Evaluation of stream and debris flow hazards on small fans along the Interstate-70 highway corridor, central Colorado, USA
- NH052 MEYER, A.; MARTINEZ-CASASNOVAS, J.A.  
Gully erosion in vineyard parcels in the NE Spain. A study of determining factors
- NH053 CARDINALI, M.; CIPOLLA, F.; GUZZETTI, F.; PAGLIACCI, S.; REICHENBACH, P.  
The new map of sites historically affects by landslides and floods in Italy

- NH054 BECCHI, I.; DOMENICHINI, L.; LA TORRE, F.; CAPORALI, E.  
Influence of heavy rainfalls on road safety
- NH055 CIPOLLA, F.; SEBASTINI, C.  
Techniques for hydrological risk assessment in civil protection planning
- NH056 ORTIGOSA, L.; ARNAEZ, J.; GARCIA-RUIZ, J.M.  
Geomorphological mapping and GIS techniques for predicting geomorphological hazards
- NH057 MATOVA, M.; FRANGOV, G.; PETKOVSKI, R.; ALIAJ, S.  
The study of land subsidence in the regions of Sofia, Skopje and Tirana
- NH058 AMANTIA, A.; FERRARA, V.; PAPPALARDO, G.  
Landslide hazard and risk mapping: a case study in Alcantara River basin (NE Sicily - Italy) \*
- NH058A MAGAGNOSC, J.S.  
Geomorphological map (1:25.000) of the epicentral area of the 1980 El Asnam's earthquake (Algeria) \*
- NH058B PARADIS, S.J.; PERRET, D.; BEGIN, C.  
Contribution of detailed surficial mapping in the reconnaissance of multi-event landslides in postglacial marine clays

#### NH6 Transfer of the scientific information to the users

Convener: Becchi, I.

Co-Convener(s): Guzzetti, F.

Tuesday, 21 April 1998

Lecture Room: STUDIO

Co-Sponsored by: UNESCO

Chairperson: N.N.

- 14:00 SICCARDI, F.  
Do we need a Natural Hazard Journal?
- 14:20 BAZZOCCHI, F.; CACIOLI PACISCOPI, G.; PROFETI, G.  
Coping with floods: a proposal for a museum in Florence
- 14:40 SZINELL, CS.; WILHITE, D.  
Developing an agrometeorological information system to mitigate the effects of drought
- 15:00 GARROTTE, L.; CUENA, J.  
A man-machine conversation model for real-time management of emergency situations
- 15:20 NATIVI, S.; PALMISANO, E.; FEDERICI, G.; BUGLI, E.  
Interoperability systems for supporting decision-makers in the environment sector
- 15:40 RUBBIA RINALDI, G.; PADULA, M.; ROTA, D.; ZERGA, A.  
Information dissemination fo the seismicity of Italian area through the GNDT web site (Oral + PC demo)
- 16:00 CARDINALI, M.; GUZZETTI, F.; REICHENBACH, P.; TONELLI, G.  
Conveying scientific information to the users: the experience of the GNDCI information delivery system (Oral + PC demo)

Video and PC demos: Tuesday, 17.00-19.00 in the poster area

HN

## Additional Symposia

### **STA Workshop on the EC TMR program: Scientific Training and Access to Aircraft for Atmospheric Research Throughout Europe (STAAARTE): experiences-results-discussions**

Convener: Krautstrunk, M.

Co-Convener(s): Kindred, D.R.; Penazzi, G.

Thursday, 23 April 1998

Lecture Room: R8

Co-sponsored by: European Commissions's TMR Programme

Chairperson: Rösler, F.

- 09:00 RÖSLER, F.  
The STAAARTE-Project (Scientific Training and Access to Aircraft for Atmospheric Research Throughout Europe)
- 09:15 KRAUTSTRUNK, M.  
DLR Falcon: a research aircraft for STAAARTE
- 09:30 VIDAL-MADJAR, D.; PENAZZI, G.  
ARAT Fokker 27 facility
- 09:45 FOOT, J.S.; KINDRED, D.R.  
STAAARTE and the MRF C-130 research aircraft
- 10:00 FILIPPI, D.; LE ROULLEY, J.-C.; DULAC, F.  
STAAARTE ISOKI Experiment: first steps towards an automated airborne isokinetic instrument \*
- 10:15 DULAC, F.; FILIPPI, D.; CACHIER, H.; EZAT, U.; LE ROULLEY, J.C.; PARONIS, D.; CHAZETTE, P.; HAMONOU, E.; MIHALOPOULOS, N.; KOUVARAKIS, G.; GAUDICHET, A.; CAQUINEAU, S. LOSNO, R.; MALINGRE, G.; QUISEFIT, J.P.; ALBERS, F.; WIRTH, M.; KRAUTSTRUNK, M.  
Characterization of tropospheric aerosols in the eastern Mediterranean from airborne and other measurements during the June 1997 STAAARTE campaign
- 10:30 BREAK
- Chairperson: Vidal Madjar, D.
- 11:00 PETRAKIS, M.; KOUIMTZIS, T.; GLAVAS, S.  
ARTE Athens campaign 1997 \*
- 11:15 VAROTSOS, C.; ALEXANDRIS, D.; CHRONOPOULOS, G.  
Radiation field in the troposphere over Greece (RAFT/STAAARTE) \*
- 11:30 MORENO, J.; FORTEA, J.; DEL PINO, J.; CADIMA, I.; JOCHUM, A.; BAUMANN, R.; AMAN, V.; GIEZ, A.; ZANDER, D.; RÖSLER, F.; KRAUTSTRUNK, M.  
Mapping surface and atmospheric conditions for energy balance studies in arid vegetated areas, by using a combination of sensors on board the DLR-Falcon 20E5 D-CMET aircraft

- 11:45 NYEKI, S.; KALBERER, M.; COLBECK, I.; BALTENSBERGER, U.; PETZOLD, A.; SCHRÖDER, F.; WIRTH, M.; KRAUTSTRUNK, M.; RÖSLER, F.  
Development of the planetary boundary layer/free troposphere height over a high-alpine mountain station: time-series study of airborne lidar transects
- 12:00 PIRINGER, M.; BAUMANN, K.; TRAHER, F.  
Evaluation of mixing heights and ozone profiles deduced from ground-based measurements and remote sensing by aircraft
- 12:05 PUTZ, E.  
Vertical profiles of the photolyses rate  $J(O_1D)$  and the spectral actinic flux \*
- 12:10 PAPAYANNIS, A.; BALIS, D.; GALANI, E.; ANCELLET, DG.; ZIOMAS, I.; KOSMIDIS, E.  
Airborne ozone dial measurements over Greece on board the French Arat airplane during the STAAARTE'96 campaign
- 12:25 MACELLONI, G.; PALOSCIA, S.; PAMPALONI, P.; SUSINI, C.; RUISI, R.  
Airborne microwave radiometer measurements on an agricultural site: the IROE-STAAARTE mission
- 12:40 COUTINHO, M.; BORREGO, C.; BARROS, N.; VALINHAS, M.J.  
Atmospheric field study in the Lisbon region
- 12:55 LUNCH

Chairperson: Foot, J.

- 14:10 PERSSON, T.  
STAAARTE airborne measurements - results from southern WINTEX region
- 14:25 VAN MEERVELD, H.J.; SARA, S.A.; VAN DE GRIEND, A.A.  
Remote sensin studies over the southern NOPEX region - Uppsala site
- 14:40 KANGAS, M.; LAINE, V.; HEIKINHEIMO, M.  
Use of C-130 airborne measurements in the verification of satellite albedo measurements in the northern NOPEX/WINTEX area
- 14:55 HOJSTRUP, J.  
Coastal boundary layers in the Baltic Sea
- 15:10 MENSINK, C.; DEBRUYN, W.  
Transboundary flux measurements for photochemical model validation in Flanders
- 15:25 RÖSLER, F.  
Discussion
- 16:30 END OF SESSION

---

### **Physics and Chemistry of the Earth**

If you intend to organize an event at a larger meeting, a workshop or topical conference within geology, geochemistry, geophysics, hydrology, oceanography or atmospheric and planetary and space sciences, please consider *PCE* for the publication of your proceedings.

---

# Author Index

AAGAARD, P. 151, 152  
AALTO, P. 192  
AARO, S. 73, 87  
ABABOU, R. 157  
ABARCA DEL RIO, R. 132  
ABASSI, A. 199  
ABBONDANZI, F. 150  
ABD-ELMOTAAL, H. 131  
ABDELMOULA, M. 151  
ABE, S. 115  
ABELLO, P. 168  
ABERSON, S.D. 255, 256  
ABILOVA, E. 233  
ABOU HELEKIA, M.M. 106  
ABRAHAM, P. 247  
ABRAHAMSEN, N. 96, 97, 101, 103  
ABRAMOVITZ, T. 83, 86  
ABRIAK, N.E. 147  
ABSY, J. 161  
ABU-ZEID, N. 142  
ABUHAJAR, M.I. 106  
ACCADIA, C. 178  
ACCAINO, F. 118  
ACHARD, F. 107  
ACHAUER, U. 77-79, 87  
ACHILLI, V. 277, 278  
ACKER, K. 229  
ACKERER, P. 157  
ACKERMANN, R. 197, 198  
ACOCCELLA, V. 76, 93  
ACREMAN, M. 156, 160  
ACS, F. 145  
ACTON, G. 72  
ACUNA, M.H. 236, 240  
ADAM, A. 113  
ADAM, J. 115, 117  
ADAMS, J. 194, 195  
ADAR, E. 147  
ADAR, E.M. 140, 147, 153, 154  
ADCOCK, S.T. 166  
ADE, P.A.R. 246-248  
ADEM, J. 203  
ADLER, M.-J. 145, 154, 270  
ADLER, P.M. 108, 112, 139  
ADORNI, G. 276  
ADRIAENS, P. 150  
AELLIG, M.R. 224  
AERTS, J.C.J.H. 153  
AFANASYEV, Y.A.D. 258  
AFILHADO, A. 271, 272  
AFONIN, V.V. 222  
AGAFONOV, A.V. 111  
AGAR, S.M. 108, 113  
AGARWAL, A.K. 113  
AGNESE, C. 143  
AGNEW, D. 134  
AGOSTINI, P. 261  
AGUIRRE, L. 68  
AGUIRRE-DIAZ, G.J. 278  
AGULOVA, L.P. 120  
AGUZZI, A. 195  
AHMADI, A. 157  
AHMED, F.M. 106, 107  
AHONEN, J. 146  
AHRENS, B. 185  
AIDONA, E. 104  
AIELLO, G. 74  
AIGNER, T. 139  
AIKI, H. 266  
AIKIN, A.C. 227  
AJO, J. 234, 235  
AKCIG, Z. 105, 106  
AKDEMIR, Ö. 105, 106  
AKIVIS, T.M. 167  
AKSENOV, V.N. 193  
AKSENOV, V.V. 89  
AKSU, A. 119  
AKYOL, N. 105  
AL-BAYARI, O. 129, 277, 278  
ALADOS-ARBOLEDAS, L. 175  
ALASTUEY, A. 178

ALBALADEJO, J. 159  
ALBAREDE, F. 198, 199  
ALBARELLO, D. 64, 65, 274  
ALBERCA, L.F. 209  
ALBEROLA, C. 167  
ALBERS, F. 184, 280  
ALBERTO, D. 193  
ALBINI, P. 65  
ALBRECHTSEN, H.J. 142  
ALDANA, M. 99  
ALEKSEEV, A.S. 87, 272, 273  
ALEKSEEV, V.A. 273  
ALEKSUTIN, M.V. 80  
ALESHKOV, Y.Z. 258  
ALESTRÖM, P. 148  
ALETTI, V. 224  
ALEXANDRESCU, M. 107  
ALEXANDRIS, D. 229, 230, 280  
ALEXEEV, A.D. 112  
ALEXEEV, I. 212  
ALEXEEV, I.I. 207, 212  
ALEXEEV, V.A. 191  
ALFARO, A. 276, 277  
ALFIER, R. 232, 262  
ALFONSI, L. 64, 72  
ALFONSI, P. 270  
ALFONSO-MUNOYERRO, M.A. 200  
ALGRINIER, P. 97  
ALIAI, S. 279  
ALIANI, S. 200  
ALIBES, B. 267  
ALICKE, B. 195  
ALILA, Y. 152  
ALIMOV, O.A. 210  
ALISSE, J.-R. 258  
ALLAART, M.A.F. 226  
ALLAIN, C. 252  
ALLAN, B. 195  
ALLAN, B.J. 196, 197  
ALLEMAN, L. 198, 199  
ALLEMAND, P. 75, 80, 88, 237, 238  
ALLEN, J.I. 198  
ALLEN, J.T. 166  
ALLEN, M. 252  
ALLEN, M.R. 165, 202  
ALLEN, R.M. 78  
ALLERTON, S. 115  
ALLEYNE, H. 222  
ALLIN, N. 113  
ALLIS, R. 118  
ALMAR, I. 67, 218  
ALMECJA, C. 146  
ALMEIDA, T. 109, 110  
ALMENDROS, J. 278  
ALONSO, E.E. 111  
ALONSO, S. 268, 269  
ALONSO-MEDINA, A. 94  
ALPAY, Y. 65  
ALPEROVICH, L. 114, 218  
ALPERS, W. 167, 168  
ALSOP, I. 76  
ALTIERI, B. 247, 248  
ALTWEGG, K. 242  
ALVA, L. 99  
ALVAREZ FANJUL, E. 200  
ALVAREZ, J. 154  
ALVAREZ-MARRON, J. 63, 120  
ALVERSON, K. 181  
ALVES, C. 187  
ALVES, J. 183, 191  
ALVES, M. 127  
ALVES, O. 124  
AMALVICT, M. 104  
AMAN, V. 280  
AMANI, A. 157  
AMANIL, A. 188  
AMANO, H. 71  
AMANTIA, A. 279  
AMATA, E. 217, 220, 221  
AMATO, A. 88, 89, 93  
AMBAR, I. 161  
AMBAUM, M. 232, 261  
AMBROISE, B. 158  
AMBROSI, J.-P. 101  
AMBROSIUS, B. 70  
AMBROSIUS, B.A.C. 81, 133, 134

AMEGLIO, L. 79, 80  
AMELUNG, F. 123  
AMETISTOVA, L.E. 168  
AMMANN, M. 194  
AMORIM, V. 177  
ANAGNOSTOU, E.N. 145  
ANASTASIO, N. 186  
ANCELLET, DG. 280  
ANCELLET, G. 180, 229, 231  
ANCORP WORKING GROUP 82  
ANDERSEN, K.K. 198, 262  
ANDERSEN, O. 125  
ANDERSEN, O.B. 127, 130  
ANDERSEN, P.H. 134  
ANDERSON, C. 68  
ANDERSON, D. 183, 191  
ANDERSON, D.L.T. 191  
ANDERSON, H. 70  
ANDERSON, J. 250  
ANDERSON, J.G. 231  
ANDERSON, K. 236  
ANDERSON, K.A. 213, 240  
ANDERSON, L. 161  
ANDERSON, L.G. 170  
ANDERSON, P.S. 177, 258  
ANDERSON, R. 249  
ANDERSON, R.C. 251  
ANDERTON, S. 152  
ANDEWEG, B. 64  
ANDRADE SANTOS, J. 191  
ANDRADE, C. 267  
ANDRE, J.-C. 201, 233-235  
ANDRE, R. 217  
ANDREEV, E.G. 193  
ANDREEVA, E.S. 209  
ANDREICHKOV, B.M. 239, 243, 244  
ANDREJCZUK, M. 203  
ANDRES HERNANDEZ, M.D. 196, 197, 205, 206  
ANDRETTA, V. 224  
ANDREU, J. 156, 160  
ANDREWS, M.D. 225  
ANDRIAENS, P. 149  
ANDRICEVIC, R. 141  
ANDRIE, C. 161  
ANDRIEU, H. 153  
ANDRIEUX, P. 157, 158, 160  
ANDRITSANOS, V.D. 131  
ANDRONOVA, N. 226, 227, 232, 233, 262  
ANFOSSI, D. 174  
ANGELIER, J. 70, 74, 75, 82, 86, 274  
ANGELL, J. 189  
ANGERMANN, D. 81, 126  
ANGULO-JARAMILLO, R. 158  
ANGUY, Y. 108-110  
ANIKIYEV, V.V. 149  
ANISIMOV, M.V. 168  
ANKAYA, O. 105, 106  
ANLAUF, K. 194  
ANNAMALAI, H. 192  
ANNAN, J.D. 201  
ANNEN, C. 94  
ANNENKOV, S.YU. 263, 264  
ANNWEILER, E. 149  
ANQUETIN, S. 261  
ANSAN, V. 238  
ANSANA, S. 184  
ANSCHUTZ, P. 199  
ANSELMETTI, F.S. 108  
ANSORGE, J. 63, 84  
ANTHONY, T. 149  
ANTICH, N. 156, 157  
ANTONIOLI, F. 122  
ANTONIOU, C. 229  
ANTONOV, J.I. 163  
ANTONOW, M. 98  
ANTONOWICZ, L. 83  
ANTORANZ, A. 163  
ANTSIFIROV, A.I. 113  
ANTSIFIROV, A.V. 112, 113  
ANTSYFEROV, S.M. 167  
ANYAMBA, E. 189  
ANZENHOFER, M. 130  
ANZIDEI, M. 90  
AOUDIA, A. 64  
APARINA, E.V. 196



APAYDYN, N.	65	AUDOUBERT, J.-M.	200	BALLUCH, M.G.	261
APEL, J.R.	263	AUFFRET, G.	120, 189	BALMADEA ALONSO, M.	124
APOTRIA, T.	76	AUGLIERA, P.	79	BALMADEA, M.	183, 191
APPEL, E.	65, 96, 97, 99-101	AULANIER, G.	225	BALMFORTH, N.J.	257
APPELGREN, B.	155	AURASS, H.	223	BALOGH, A.	213-215
APPENZELLER, B.	151	AURELA, M.	176, 177	BALSIGER, H.	242
APPENZELLER, C.	165	AURIOL, F.	184	BALTAKOV, G.K.	65
APPERT-COLLIN, J.C.	149	AUSTIN, J.	208, 225	BALTAZAR, M.	234, 235
APPLEBY, G.	135	AUZET, A.V.	157, 158	BALTENSPERGER, U.	194, 280
ARABELOS, D.	131	AVAKYAN, S.V.	67, 207	BALUTEAU, J.P.	248
ARANEDA, M.	66	AVDIS, V.	81	BAMERT, K.	214
ARATTANO, M.	279	AVENDAÑO, M.S.	66	BANASZKIEWICZ, M.	214, 240, 245
ARBOGAST, P.	179, 181	AVERBACH, V.S.	253	BANAT, P.	256
ARDELEANU, L.	91	AVERBUCH, O.	100	BANDONNEAU, Y.	260
ARDIZZONE, J.	189	AVIGAD, D.	102	BANDY, B.	232, 262
AREFJEV, N.	156	AVINO, R.	93	BANERDT, W.B.	249
ARELLANO, F.	126	AVKHADIEV, F.G.	140	BANERJEE, S.K.	99
ARGNANI, A.	63, 101, 117	AVOUAC, J.-P.	112	BANKS, C.J.	73
ARGUS, D.F.	71	AVOUAC, J.P.	123	BANKS, M.K.	150
ARHAN, M.	161, 166	AVRAAM, D.G.	150	BANKS, R.J.	113
ARIN, L.	168	AXFORD, W.I.	214, 223	BAPTISTA, M.A.	267, 274
ARINGOLI, D.	275	AYALA, C.	83	BAPTISTA, P.	81
ARINO, O.	107	AYARZA, P.	78, 79	BAR-SEVER, Y.E.	124, 129
ARIYA, P.A.	186, 194	AZZARA, R.	89, 93	BARABASH, V.	207, 208
ARKHIPKIN, A.V.	164	AZZARO, R.	274, 275	BARAILLE, R.	125
ARKHIPKIN, V.S.	168, 170	BAAG, C.	103	BARAN, L.W.	130, 134, 219
ARKOS, G.G.	238	BABA, K.	118	BARAN, P.	136
ARLITT, R.	84	BABADZHANOV, P.B.	246	BARANOV, V.B.	214
ARMADILLO, E.	77, 278	BABBUCCI, D.	64, 65	BARATTA, G.A.	242, 243
ARMAND, D.	153	BABEIKO, A.YU.	236	BARBANO, M.S.	274, 278
ARMENGAUD, A.	262	BABEYKO, A.A.	69	BARBARESCO, F.	234, 235
ARMIENTI, P.	95	BABOUKAS, E.	204-206	BARBERI, G.	92
ARMUJO, R.	81, 123	BABUSKA, V.	70, 87	BARBERO, S.	270
ARMOR GROUP	79	BACA, D.	115	BARBETSEAS, S.	169
ARNAEZ, J.	153, 154, 279	BACH, J.	142	BARBIAC, TH.	158
ARNAU, P.A.	168	BACHELIER, E.	123	BARBIERO, R.	179
ARNAUD, P.	160, 179, 269	BÄCHLE, G.	110	BARBIN, Y.	242
ARNAULT, S.	125	BÄCHLER, D.	101	BARCELONA, M.J.	150
ARNEODO, A.	254	BÄCHTOLD, W.	148	BARCKICKE, J.	202
ARNESSEN, L.	74	BACIC, Z.	127	BARCZEWSKI, B.	150
ARNOLD, F.	196, 197	BACKHAUS, J.O.	168, 169	BARD, P.-Y.	277
ARNOLD, G.	238, 241, 244, 249, 251	BACMEISTER, J.T.	208	BARDOSSY, A.	143-145, 148
ARNOLD, K.	174, 175	BACRY, E.	254	BARDOUKI, H.	204, 205
ARNOLD, M.	123, 162	BADA, G.	74	BARDOUX, G.	158
ARNOLD, T.	193	BADAL, J.	64, 65, 91	BARET, F.	107, 154, 157
ARNOUX-CHIAVASSA, S.	167	BADALYAN, O.G.	215	BARFRED, M.	193
ARPE, K.	191, 192	BADAUT-TRAUTH, D.	100	BARGAGLI, A.	179, 201
ARRAES-MESCOFF, R.	163	BADEWIEN, T.	173	BARGE, P.	248, 249
ARREGUI, J.	239	BADGER, J.	179	BARIAC, T.	158
ARSADI, E.	114	BADULIN, S.I.	264	BARIS, S.	64
ARTALE, V.	172, 173	BAE, S.-H.	119	BARKA, A.	81, 275
ARTEMIEVA, I.	92	BAHR, C.	180	BARKER, J.A.	139
ARTESE, G.	277, 278	BAER, F.	202	BARKER, J.F.	149
ARTHURTON, R.S.	123	BAER, G.	102	BARKER, P.A.	99
ARTINANO, B.	177, 178	BAER, M.	64	BARKIN, YU.V.	71, 127, 128
ARTINIAN, E.	157	BAEY, J.M.	166	BARKMEIJER, J.	203
ARTZNER, G.	224	BAGENAL, F.	242	BARLIER, F.	134
ARVIDSON, R.	64	BAGLIANI, M.	232, 261	BARLIK, M.	131, 137, 138
ARYKOV, A.A.	212	BAHMUTOV, V.	102	BARNES, A.	215
ASENCIO, N.	268	BAHR, K.	114	BARNES, J.	249
ASFIRANE, F.	80	BAHUREL, P.	124, 130, 200	BARNES, J.R.	249
ASHKENAZI, V.	123, 134	BAIER, F.	207, 208, 227	BARNIER, B.	162, 163, 166, 181
ASHTON, J.H.	98	BAINES, K.	239	BARON, PH.	226
ASIMOKOPOULOS, D.	176	BAIS, A.F.	228	BARQUINS, M.	74
ASMAR, S.W.	240	BAKAN, S.	184, 233	BARRACLOUGH, B.J.	246
AST, A.L.	277, 278	BAKER, C.	88	BARRETT, E.C.	155
ASTAKHOVA, N.L.	216	BAKER, H.C.	129, 134	BARRETT, J.	250
ASTERIADIS, G.	273	BAKER, J.M.	194	BARRIE, L.	194
ASTIN, I.	184, 210	BAKER, K.B.	217	BARRIE, L.A.	193
ASTOK, V.	168	BAKER, M.A.	148	BARRIO-ALVERS, L.	66, 83
ASTRALDI, M.	164	BAKER, T.F.	122, 134	BARRIOT, J.P.	237
ASUDEH, I.	86	BAKHMUTOV, V.	99	BARROS, N.	280
ATHANASSIADOU, M.	174	BAKLANOV, A.	174	BARROSO, C.S.F.	177
ATHANASSOULA, A.	248	BAKUCZ, P.	253	BARROW, C.H.	242
ATHIAS, V.	163, 202	BALA, A.	77	BARSKOV, P.	108
ATKINSON, P.M.	279	BALACHEVTSEV, M.	154	BARTELS, J.	110
ATLAS, R.	189	BALBONI, V.	199	BARTHELEMY, E.	168
ATREYA, S.K.	248	BALDI, P.	90, 277	BARTHELET, P.	165, 183
ATTIE, J.L.	186	BALIS, D.	226, 261, 280	BARTHELMES, F.	122, 133
AUAD, G.	181, 190	BALIVA, A.	237	BARTHESE, V.	100
AUBERT, D.	253	BALLABRERA, J.	201	BARTHOLOMEW, J.	191
AUBIER, M.	243	BALLANI, L.	104, 105	BARTLETT, C.	94
AUBINET, M.	176, 177	BALLE, J.	166	BARTOLINI, C.	160
AUBOURG, C.	74	BALLESTER, J.L.	257	BARTOLOME, R.	115, 116
AUCLAIR, F.	172	BALLING, N.	66, 70, 86	BARTON, C.C.	255
AUDIGANE, P.	110	BALLSCHMITER, K.	204, 205	BARUCCI, M.A.	246, 248

BARYKIN, S.K. 73  
 BARYLNIKOV, A. 86  
 BASBERG, L. 151  
 BASCHEK, B. 172  
 BASE, S.D. 242  
 BASHELEISHVILI, L. 275  
 BASIC, T. 127, 131  
 BASILE, C. 75  
 BASILE, I. 198  
 BASILE, J. 198  
 BASILE, V. 103  
 BASILEVSKY, A.T. 236, 237, 251  
 BASILI, A. 89  
 BASILI, R. 89  
 BASIN'96 WORKING GROUP 83, 84  
 BASKOUTAS, I.G. 88  
 BASNETT, T.A. 190  
 BASSFORD, M. 195  
 BASSINOT, F. 65  
 BASTET, G. 141  
 BASTIN, M.E. 256, 265  
 BASTOS, L. 81, 122, 123, 127, 130, 200, 201  
 BASTRUP-BIRK, A. 177, 229  
 BATALLA, R.J. 143, 160  
 BATCHVAROVA, E. 173  
 BATES, J.R. 190, 191  
 BATES, N.R. 163  
 BATH, A.H. 140  
 BATHELET, P. 183  
 BATHELMIE, B. 176  
 BATHURST, J.C. 158, 159  
 BATRAK, G. 144  
 BATRAK, G.I. 141  
 BATS, M. 122  
 BATT, C. 103  
 BATTAGLIA, A. 184  
 BAUER, S. 262  
 BAUER, D. 194, 195  
 BAUER, E. 182  
 BAUER, H.-S. 192  
 BAUER, P. 179  
 BAUER, S.J. 236, 238-240  
 BAUGH, B. 186  
 BAUGUITTE, S. 232, 262  
 BAUMANN, K. 280  
 BAUMANN, R. 280  
 BAUMANN, T. 142, 147  
 BAUMERT, H. 200  
 BAUMGARTEL, A. 240, 241  
 BAUMGARTEL, K. 213, 215, 222  
 BAUMGARTEN, G. 227  
 BAUMGARTNER, M. 125, 126, 155  
 BAUSKE, R. 240  
 BAUTISTA, S. 159  
 BAUWENS, W. 153  
 BAVIERE, M. 142  
 BAYER, R. 134, 162, 163  
 BAYER, U. 73, 74, 76, 83  
 BAYOU, B. 102  
 BAZILEVSKAYA, G. 207  
 BAZIN, S. 117  
 BAZZOCCHI, F. 279  
 BEAN, C. 252  
 BEAN, C.J. 87, 88  
 BEARD, A.G. 209  
 BEAUDOING, G. 147  
 BEAUDUCEL, F. 94  
 BEAUFORT, L. 65  
 BEAUMONT, C. 80, 81  
 BEAUMONT, M. 155  
 BEAUVAIS, A. 253  
 BEBLO, M. 107  
 BECAGLI, S. 171  
 BECCHI, I. 279  
 BECK, A. 208, 232, 262  
 BECK, C. 190  
 BECK, L. 98, 100  
 BECKER, G. 227  
 BECKER, H. 102  
 BECKER, K. 197, 198, 250  
 BECKER, K.-H. 197, 198  
 BECKER, M. 123, 129, 134, 136, 137  
 BECKER, T. 250  
 BECKERS, J.-M. 166, 172  
 BECKERS, J.M. 172, 260

BECKMANN, A. 171  
 BEDIDI, A. 123  
 BEDJANIAN, Y. 194, 195  
 BEDJANIAN, YU. 194  
 BEDLINGTON, D. 123, 134  
 BEDNAR, J. 261  
 BEDRICH, S. 124, 135, 219  
 BEEKMAN, F. 72-74  
 BEEKMANN, G. 229  
 BEEKMANN, M. 229, 231, 262  
 BEER, J. 225  
 BEGHEIN, C. 104  
 BEGIN, C. 275, 279  
 BEHNKE, W. 196  
 BEHR, O. 154  
 BEHR, P. 194  
 BEHRA, PH. 151  
 BEHRMANN, J.H. 76  
 BEICHERT, P. 194, 195  
 BEILECKE, T. 84  
 BEILECKE, TH. 83  
 BEINE, H.J. 228  
 BEISMANN, J.-O. 162  
 BEKKI, S. 232, 262  
 BEKLEMISHEV, A.B. 122  
 BELARDINELLI, F. 181  
 BELARDINELLI, M.E. 74, 275  
 BELDJOUDI, L. 155  
 BELENKAYA, E.S. 217  
 BELENKAYA, I. 119  
 BELENOVICH, T.Y. 275  
 BELIAEVA, E.A. 272  
 BELIN, S. 108  
 BELKNAP, D.F. 71  
 BELL, J. 249  
 BELLAICHE, G. 120  
 BELLAVIN, O.V. 106  
 BELLOT, J. 142, 143  
 BELLUCCI, F. 277  
 BELLUME, M. 179  
 BELMONT, G. 222, 223  
 BELO, M. 191  
 BELOGOLOV, V.S. 228  
 BELOUSOVA, A.P. 147, 155  
 BELOVA, N.I. 210  
 BELTON, M. 237  
 BELTON, M.J.S. 237  
 BELVISO, S. 204-206  
 BELYAEV, P.P. 210, 216  
 BELYAVSKY, V.V. 112, 113  
 BELZ, S. 155  
 BEN JELLOUL, M. 265, 266  
 BEN OTHMAN, D. 157  
 BEN-ATIG, F. 101  
 BEN-AVRAHAM, Z. 64, 74, 81, 118, 119  
 BENAVENTE, J. 142, 143, 146  
 BENCZE, P. 67, 209, 218  
 BENDER, M.A. 255  
 BENDJOURDI, H. 146  
 BENDYNA, M. 137, 138  
 BENE, J. 259  
 BENECH, B. 173, 174  
 BENEDEK, J. 105  
 BENEDICKTER, H.R. 148  
 BENESTAD, R.E. 191  
 BENFORD, D. 243  
 BENGTSOON, L. 129, 181, 189, 192, 193  
 BENIGUEL, Y. 220  
 BENIKOV, E. 263  
 BENILOV, E. 264  
 BENJAMIN, S.G. 202, 234  
 BENKHOFF, J. 241  
 BENKIRAN, M. 172  
 BENNETT, A. 250  
 BENTAMY, A. 182  
 BENVENISTE, J. 125, 126  
 BENVENUTO, F. 254, 268, 279  
 BENZ, H.M. 92  
 BENZ, W. 248  
 BENZI, R. 254, 255  
 BERANGER, K. 162  
 BERARDI, R. 89  
 BERASTEGUI, X. 73  
 BERBIGIER, P. 158, 177  
 BERCOVSKA, V. 66  
 BEREST, P. 158

BEREZUTSKII, A.V. 168, 169, 171  
 BERG, G. 156  
 BERGAMASCO, L. 264, 267  
 BERGAMINI, C. 260  
 BERGEAT, F. 83  
 BERGER, A. 111  
 BERGER, F.H. 185, 192  
 BERGER, J. 107  
 BERGERAT, F. 75, 84  
 BERGERET, V. 232, 262  
 BERGFJORD, E. 76  
 BERGMAN, S. 105, 106  
 BERGMANN, J.C. 174  
 BERGOT, T. 181  
 BERGSSON, B.H. 78  
 BERHO, F. 194, 195  
 BERKOWITZ, B. 147  
 BERNABE, Y. 139  
 BERNARD, D. 108-110, 139, 141  
 BERNARD, M.L. 110, 112  
 BERNARD, P. 146  
 BERNARD, T. 113  
 BERNARDI, D. 110  
 BERNARDINI, F. 274  
 BERNARDINO, M.C. 144  
 BERNASCONI, S. 225  
 BERNDT, C. 116  
 BERNE, S. 120  
 BERNHARDT, K. 173  
 BERNHOFER, CH. 146, 176  
 BERNIER, F. 112  
 BERNSTEIN, S. 116  
 BERNSTEN, T. 233  
 BEROU, J.-M. 145  
 BERRE, L. 202, 203  
 BERRESHEIM, H. 196, 197  
 BERRINO, G. 93, 277, 278  
 BERROCOSO, M. 134  
 BERRY, P.A.M. 127, 135  
 BERRY, S.T. 210  
 BERSCH, M. 162  
 BERTAUX, J.L. 213, 214, 226, 242  
 BERTEL, L. 219, 220  
 BERTHELIER, J.-J. 220, 221  
 BERTHELIER, J.J. 222  
 BERTHELOT, B. 107  
 BERTHIER, E. 153  
 BERTHOD, M. 115  
 BERTHOMIER, M. 223  
 BERTIN, N. 186, 187  
 BERTOTTI, G. 63, 73  
 BERTOTTI, L. 267  
 BERTRAND, C. 183  
 BERTRAND, E. 80, 93  
 BERTUZZI, P. 146  
 BERUBE, M. 135  
 BERZINS, V. 168  
 BESLIER, M.O. 79, 115, 116  
 BESLIER, X. 116  
 BESSEMOULIN, P. 157, 158, 179  
 BESSER, B.P. 216  
 BEST, A. 106, 107  
 BEST, M.J. 202  
 BEST, S.E. 166  
 BESUTIU, L. 106, 107  
 BETANCOR GROTHE, M. 184  
 BETHERS, U. 139, 144, 168  
 BETHOUX, J.P. 193, 199  
 BETHOUX, N. 79, 81, 86  
 BETTA, R. 213  
 BETTAHAR, M. 142  
 BETTS, A.K. 177  
 BETTS, R. 193  
 BETZL, N. 77  
 BEUTLER, G. 124, 128  
 BEUZIT, J.-L. 248  
 BEVEN, K. 140, 152, 157  
 BEVEN, K.J. 269  
 BEYERLE, G. 204, 205, 208  
 BEYERLE, U. 190  
 BEYRICH, F. 175  
 BEZARD, B. 246-248  
 BEZERRA, F.H.R. 71  
 BGR'S MARINE  
 GEOPHYSICAL GROUP 115  
 BHANDARI, N. 245

BIANCALE, R.	124	BLESA, F.	124	BONNEFOND, J.M.	158, 177
BIANCHI, S.	71	BLEWITT, G.	81, 129, 130	BONNEFOND, P.	129, 134
BIANCO, F.	88, 92	BLINDHEIM, J.	165	BONNET, M.P.	148
BIANCO, G.	64, 134, 135	BLITNESOV, M.	78, 79	BONNETON, P.	258
BIBIKOVA, T.N.	192	BLITZKOW, D.	131	BONNIER, M.	258
BIBILASHVILI, T.	173	BLIX, T.A.	209	BONNISSEL-GISSINGER, P.	151
BIBRING, J.P.	241	BLOCK, J.-C.	150	BONSANG, B.	187, 205, 206
BIBUS, E.	96, 97	BLOCK, J.C.	151	BONTEMPS, B.	255
BICHLER, M.	94	BLOCK, M.	115, 117	BONVALOT, S.	122, 278
BICKMEIER, W.	185	BLOEMENDHAL, J.	99	BONY, S.	183
BICSKEI, T.	107, 114	BLOOMFIELD, J.P.	139	BOOKHAGEN, B.	275, 276
BIDOGGIO, G.	147	BLÖSCHL, G.	153, 154	BOON, J.G.	200, 202
BIELIK, M.	67, 85	BLOSS, W.J.	196	BOONE, C.	201
BIELLA, G.	86, 87	BLOXHAM, J.	98	BOOTH, J.	118
BIESECKER, D.A.	225	BLUE, J.	250	BOOTH, J.S.	118
BIESSY, B.	166	BLUMEN, W.	174, 175, 180	BOOTH, S.J.	123
BIESTER, H.	150	BLUNDELL, D.J.	83, 84	BORDERIE, P.	123
BIGALKE, J.	112, 114	BLYTH, E.	148, 176	BORDI, J.J.	124
BIGG, G.R.	179	BOAIN, R.	200	BORDONABA, A.P.	153, 154, 269
BIHAM, O.	244	BOBANOVIC, J.	172, 173, 201	BORDONI, P.	75
BIJWAARD, H.	63, 67, 69	BOBROVNIKOV, S.YU.	212	BORE, J.-M.	69
BILGE, A.H.	219	BOCCALETTI, M.	64, 75, 277	BORETTI, E.	72
BILIARSKA, I.	105, 106	BOCCHIALINI, K.	224	BOREVSKY, L.V.	78
BILIARSKA, R.	105, 106	BOCHNICEK, J.	218	BORGA, M.	145, 271
BILITZA, D.	219	BOCHSLER, P.	213, 214, 224	BORGHINI, M.	181
BILLEBAUD, F.	247	BOCK, G.	69, 84	BORGSTROM, S.	277, 278
BILLIEN, M.	69	BOCK, J.	125, 126	BORISENKOV, E.	229
BILLIOTTE, J.	111	BOCK, J.H.	162	BORISOV, A.S.	97
BINA, M.	102	BOCK, Y.	123, 128, 129, 134	BORISOV, N.	216
BINDER, A.B.	245, 246	BOCKELEE-MORVAN, D.	243, 247, 248	BORJARIU, R.	183
BINGHAM, R.	222, 223	BOCQUILLON, C.	253	BORKOWSKI, J.	228
BINGLEY, R.M.	123, 134	BODDENBERG, A.	205, 206	BORMANN, H.	145, 146
BIRAUD, Y.	238	BODMER, R.	224	BORN, K.	190
BIRD, M.K.	224	BODRI, L.	65, 269	BORNAND, M.	141
BIRDIE, T.	152	BOEBEL, T.	130, 200, 201	BORODKOVA, N.	217, 220-222
BIRGÖREN, G.	65	BOEDECKER, G.	130	BORODKOVA, N.L.	220-222
BIRKE, M.	101	BOEGH, E.	154	BOROVNIKOV, V.A.	254
BIRKETT, H.R.	180	BOEHM, M.H.	217	BOROVKOV, V.	165
BIRNBAUM, G.	169	BOER, A.	135	BOROVSKY, M.YA.	176, 271
BIROL, F.	125	BOER, G.	203	BORRADAILE, G.J.	96, 97
BIRON, PH.	158	BOERING, K.A.	231	BORREGO, C.	185, 280
BIRT, C.S.	77	BOERNER, D.E.	92, 114	BORRMANN, S.	230, 231
BIRYULINA, M.S.	90	BOERNER, R.	200	BORTOLUCCI, E.	129, 267, 268
BIRYUSHOV, B.	208	BOESEN, A.	116	BORTOLUZZI, G.	117
BISCAYE, P.	198	BOETTCHER, J.	148	BORY, A.	198
BISCAYE, P.E.	198	BOEV, A.G.	243	BORZA, T.	136
BISHOP, C.	180, 181	BOFFA, J.M.	252	BOS, B.	108
BISHOP, J.	248	BOGAART, P.W.	143	BOS, M.S.	122
BISHOP, K.	152, 153	BOGDANOV, A.T.	214, 223	BÖSCH, H.	184
BISLING, P.	205, 206	BOGDANOVSKI, O.	245	BOSCH, M.	79
BISTER, A.	205, 206	BOGUSZ, J.	136-138	BOSCH, W.	125, 126, 131, 132, 162
BITHELL, M.	232, 261	BOHLEN, TH.	87	BOSCHER, D.	211, 212
BITRI, A.	79	BOILLOT, G.	116	BOSCHI, E.	72, 89, 104, 274
BITTARELLI, G.	89, 90	BOIS, P.	269	BOSI, V.	89, 90
BITYUKOVA, L.	101	BOISSARD, C.	187	BOSINGER, T.	216, 220, 221
BIVER, N.	243	BOISSON, J.Y.	111	BOSKA, J.	209
BIZOUARD, C.	132	BOISSONNAT, J.-D.	79	BOSMA, T.N.P.	150
BJERG, P.L.	149	BOJKOV, B.R.	228, 230	BOSQUED, J.M.	214
BJORAKER, G.L.	247	BOJSKOV, D.I.	223	BOSTROM, R.C.	238
BJÖRK, G.	170	BOKELMANN, G.	85	BOSY, J.	136
BJORNA, N.	211	BOLDIN, A.	199	BOTHMER, V.	223
BLACK, S.	95	BOLLIGER, C.	150	BOTSUL, A.I.	149
BLACKBURN, M.	188	BOLOGNESI, L.	94	BOTTAL, L.	145
BLACKMON, T.	250, 251	BOLTON, S.J.	241	BOTTERO, J.Y.	101
BLACKWELL, D.D.	110	BOM NIELSEN, S.	68, 70	BOTTKE, W.F.	246
BLADE, I.	190	BOMBOI-MINGARRO, M.T.	187, 188	BOTVINOVSKY, V.V.	97
BLAGOVESHCHENSKY, D.V.	211	BONACCORSO, A.	278	BOUBNOV, G.G.	166
BLAIR, S.	109	BONAFE, U.	179, 226	BOUCHE, V.	258
BLAISON, D.	225	BONAFEDE, M.	92, 93, 95	BOUCHER, C.	134
BLAKELY, R.J.	70	BONASONI, P.	179, 226, 227, 231, 261	BOUCHER, O.	183, 233, 261
BLAMART, D.	190	BONATTI, E.	116, 117	BOUCHETTE, F.	111
BLANC, E.	209	BONAZZA, D.	94	BOUCHON, M.	88-90
BLANC, G.	199	BONCIO, P.	90	BOUCHOT, V.	79, 80
BLANC, M.	223	BONDARENKO, G.YE.	80	BOUDJADA, M.Y.	243
BLANC, P.L.	151	BONDARENKO, V.	137, 138	BOUDON, G.	278
BLANC-VALLERON, M.-M.	119	BONEKAMP, H.	171	BOUDON, Y.	134
BLANCHET, I.	202	BONELLI, P.	203	BOUGEAULT, P.	174
BLANCHET, P.	234	BONEV, T.	242	BOUGERET, J.-L.	242
BLANCO, A.	237	BONGIOANNINI CERLINI, P.	268	BOUILLE, F.	124, 128
BLANCO, M.	269	BONGIOVANNI, G.	89	BOUILLIN, J.P.	63
BLANCO, M.M.	162	BONI, G.	145, 269, 270	BOUISSOU, S.	74
BLAYO, E.	201, 202	BÖNING, C.	161, 162	BOULANGER, J.-P.	191
BLAZKOVA, S.	269	BÖNING, C.W.	162	BOULEGUE, J.	158
BLECKA, M.I.	237, 244	BONINO, G.	225, 245	BOULOUBASSI, I.	119, 199
BLECKI, J.	217, 220-222	BONKHOF, K.	150	BOULYTCHOV, A.	112
BLELLY, P.L.	210, 217	BONNEFILLE, R.	190	BOUMBAR, N.	87

BOUNAMA, CH.	237	BRNAND, A.	141	BUFFETT, B.A.	118, 133
BOUNOL, D.	180	BROCCHINI, M.	258, 263	BUFORN, E.	88
BOUR, O.	74, 139	BROCHER, T.M.	86	BUGLI, E.	279
BOURAOUI, F.	158	BROCKMANN, U.	143	BÜHLER, S.A.	230
BOURASSA, M.A.	182	BROGNIEZ, G.	184	BUISHAND, T.A.	145
BOURBILLON, A.	219	BROJEWSKI, R.	178	BUITER, S.J.H.	64
BOURCIER, M.	122	BRON, E.	135	BUIZZA, R.	203, 204, 255
BOURDARIE, S.	211, 212	BRÖNNIMANN, S.	228, 229	BUJOK, O.	230, 232, 261
BOURDARIE, S.A.	211	BRONSTERT, A.	154, 155	BUKATOV, A.A.	170, 258
BOURGEOIS, O.	75	BROOKE, T.Y.	247, 248	BUKATOV, A.E.	170, 258
BOURGUIGNON, A.	80	BROOKS, H.E.	256	BUKATOV, A.E.	170
BOURHIM, S.	178	BROOKS, S.	271	BUKREEVA, E.	71
BOURIAK, S.V.	119	BROSIOUS, J.	224	BULAKH, E.	105
BOURILLET, J.F.	267	BRÖSKE, R.	194, 195	BULATOV, V.V.	168, 254
BOURLES, B.	161	BROSS, C.	96, 97	BULATOVA, N.P.	69
BOUROVA, E.	108	BROUSSEAU, C.	220	BULGAKOV, S.N.	167
BOURQUI, M.	231	BROWN, D.	83	BUMKE, K.	181
BOURRIE, G.	151	BROWN, J.M.	202	BUNGUM, H.	77
BOURUET-AUBERTOT, P.	257	BROWN, M.	94, 111	BUONGIORNO, A.	107
BOUTEN, W.	110, 146	BROWN, P.A.	155	BUONGIORNO-NARDELLI, B.	172, 173
BOVENSMANN, H.	225	BROWN, R.	75	BUONSANTO, M.J.	209, 218
BOVILLE, B.A.	183, 193	BROWN, R.A.	174	BURCHARD, H.	259
BOVO, S.	270	BROWN, S.J.	165	BURDE, G.I.	179
BOWELL, E.	246	BROWNING, K.A.	179, 180	BURESOVA, D.	218
BOWER, A.S.	161, 166	BRUAND, A.	140	BURG, J.-P.	79
BOY, J.P.	127	BRUCATO, J.R.	242	BURGDORF, M.	246-248
BOYARCHUK, K.A.	273	BRÜCKNER, J.	249	BURGDORF, M.J.	247, 248
BOYD, T.	170	BRUDERER, C.	139	BÜRGER, G.	182
BOZZANO, F.	276	BRUECKNER, H.	103	BURGERS, G.	125, 126, 191
BOZZO, E.	77, 278	BRUEN, M.	144, 155	BURIEZ, J.-C.	184
BRACCO, A.	259, 265, 266	BRÜGGEMANN, E.	176	BURIEZ, J.C.	192
BRACKBILL, J.U.	222	BRÜHL, C.	226	BURKEPILE, J.T.	225
BRACONNOT, P.	169, 190	BRÜHL, CH.	226	BURKERT, J.	196, 197, 205, 206
BRAESICKE, P.	208	BRUHN, C.	103	BURKHARDT, H.	109
BRAITENBERG, C.	104, 105	BRUHN, D.	111	BÜRKI, B.	123
BRAMSTEDT, K.	226, 227	BRUN, E.	220	BURLANDO, P.	144, 145, 153, 154
BRANCALEONI, E.	186	BRUN, J.P.	79	BURLINI, L.	109, 110
BRANCOLINI, G.	90, 114	BRUNEL, M.	92	BURLO, Z.	75
BRAND, M.	135, 136	BRUNET, C.	81, 163	BURMISTROV, V.B.	134
BRANDSMA, T.	145	BRUNET, D.	69	BURNET, F.	185
BRANDT, J.	177, 213, 229	BRUNET, G.	203, 232, 261, 266	BURNHAM, D.	234
BRANDT, P.	167, 168	BRUNET, M.-F.	73	BURNS, G.B.	217
BRANDT, U.	97, 98	BRUNET, Y.	158, 177	BUROV, E.	72, 79
BRANKART, J.M.	172, 173	BRUNETON, M.	97	BUROV, E.B.	74, 79, 82
BRANOVER, H.	179, 265	BRUNI, F.	275	BUROV, G.	71, 77, 78
BRAS, R.L.	252	BRUNIA, A.	150	BURRATO, P.	274
BRASSEUR, G.P.	225, 226, 230	BRUNNER, D.	231	BURROWS, A.	248
BRASSEUR, P.	201	BRUNO, J.	141	BURROWS, J.P.	194-197, 205, 206, 225-227
BRATH, A.	146, 154	BRUNO, R.	215	BURTON, A.	154
BRAUD, I.	157, 158	BRUNORI, C.A.	279	BURTON, M.E.	213
BRAUERS, T.	195, 204-206	BRUNS, P.	236	BURWELL, D.	200
BRAUN, H.M.	245	BRUSTET, J.M.	186	BUS, Z.	64
BRAUN, I.	94	BRUTON, A.M.	130	BUSCAIL, R.	199
BRAUN, J.	75	BRUYNINX, C.	134	BUSCHE, H.	84
BRAVO, I.	187, 188	BRUZEK, V.	189	BUSEN, R.	233
BRAZIER, R.E.	155	BRYAN, F.	127	BUSKE, S.	87
BRECHLER, J.	261	BRYAN, G.H.	180	BUSSAY, A.	144
BREEN, A.R.	213	BRYNILDSEN, N.	224, 225	BUSSEY, D.B.J.	245, 246
BREGMAN, A.	228, 230	BRYUKHANOV, A.M.	112	BUSSOLETTI, E.	242, 244, 247
BREIL, M.	194	BRZEZINSKI, A.	132	BUSUIOC, A.	145
BREITZKE, M.	120	BRZOVIC, N.	179	BUTA, C.	154
BREKKE, P.	213, 224, 225	BUAT-MENARD, P.	199	BUTCHART, M.	208
BREMER, H.	209	BUBNIAK, I.	85	BUTCHART, N.	225
BREMER, J.	207	BUBNOVA, N.YA.	68	BUTERA, I.	140
BRENGUIER, J.-L.	185, 192, 258	BUCH, W.R.	68	BUTLER, E.C.	151
BRENNINKMEIJER, C.A.M.	209	BUCHA, V.	218	BUTLER, P.	248
BRESCH, D.N.	165	BUCHERT, S.C.	209, 210, 215	BUTLER, S.L.	263
BRESSON, L.-M.	158	BUCHMANN, B.	177	BUTS, A.V.	216
BRETHERTON, C.S.	165	BÜCHNER, J.	221-223	BUTS, V.A.	216
BREUER, D.	236	BUCHTELE, J.	152	BUTZIN, M.	161
BREUNING, M.	66, 67	BUCKLEY, A.	148	BUZORIUS, G.	192
BREUS, T.K.	223	BUCKLEY, A.M.	222	BUZZELLI, M.	149
BREVDO, L.	263, 272	BUCKTON, D.	235	BUZZI, A.	178, 179
BRICAUD, A.	126	BUDETTA, G.	278	BYRDINA, S.	114
BRIDGES, N.T.	249, 251	BUDNICK, E.	220, 221	BZOWSKI, M.	213, 214
BRIE, A.	113	BUDNICK, E.YU.	217, 220, 222	CAAMERAS, N.	148
BRILLY, M.	270	BUDNIK, E.	220	CABANAS, I.	77
BRIMICH, L.	92	BUDNIK, E.YU.	221	CABANE, M.	239, 244
BRINCA, A.	223	BUDNIK, L.	217	CABOS, W.	162, 166, 191
BRINDLEY, J.	260	BUDWEG, M.	84	CABOT, F.	107
BRINI, F.	204	BUDZIEN, S.	241	CABRIT, B.	219
BRINKOP, S.	233	BUECHNER, J.	221	CACCIAMANI, C.	268
BRITO, V.P.	252	BUENESTADO, P.	173, 257	CACCIANI, M.	174, 261
BRITT, D.	249-251	BUERKI, B.	129	CACHCO, M.	267
BRIX, M.R.	81	BUES, M.A.	142	CACHIER, H.	280
BRKIC, M.	131	BUFFET, G.	115		

CACIOLI PACISCOPI, G.	279	CAPILLA, J.	160	CASTILLA, R.	264
CACON, S.	136	CAPILLA, J.E.	140, 156	CASTILLO, J.	68
CADEK, O.	69	CAPONE, M.	277, 278	CASTILLO, V.	152, 159
CADER-SROKA, B.	243	CAPORALI, A.	137, 138	CASTILLO, V.M.	152, 159
CADET, J.-P.	81	CAPORALI, E.	279	CASTORINA, A.C.	243
CADIMA, I.	280	CAPELAERE, B.	153, 157	CASTRACANE, P.	174, 261
CAHALAN, R.	184, 185	CAPRA, A.	123, 129, 278	CASTRO, I.P.	174
CAHALAN, R.F.	253, 254, 257	CAPUANO, P.	93, 277	CATALAN M., M.	124, 125
CAHILL, M.	232, 262	CAQUINEAU, S.	280	CATALAN P.-U., M.	124, 125
CAIELLI, G.	87	CARAMELO, L.	191	CATALAN P.U., M.	130
CAILLLOL, P.	258, 266	CARBONE, D.	278	CATALAN, M.	130
CAISSO, P.	234	CARBONE, V.	215	CATANI, F.	252
CAKIR, Ö.	69, 70	CARBONELL, R.	63, 86, 87, 115	CATHELINEAU, M.	113
CALADO, T.J.	107	CARDA, J.	178, 199	CATHELS, L.M.	110
CALAIS, E.	77, 78, 81, 82, 123, 130, 133, 134	CARDIN, PH.	98	CATSAMBAS, A.	229
CALANCA, P.	174, 197, 198	CARDINALI, M.	279	CATTANEO, M.	79, 82, 86, 89, 90, 93
CALCAGNO, PH.	79, 80	CARDON, K.	125, 126	CATTELL, C.	217
CALCARA, M.	199	CARDONA, F.	150	CATTIN, R.	81, 110
CALCUTT, S.B.	239	CARDOSO, R.M.A.P.	176	CAULFIELD, C.P.	258
CALINI, A.	267	CARENA, E.	259	CAULLIEZ, G.	263
CALISESI, Y.	226, 227	CARIGNAN, J.	198	CAUTENET, G.	177
CALISSE, P.G.	174, 261	CARILLO, A.	179, 201	CAUTENET, S.	177
CALLEJA, L.	109	CARISSIMO, B.	173, 174, 177	CAUTENOT, S.	186
CALMANT, S.	69	CARL, P.	191, 192	CAUVIN, C.	79, 80
CALMAR SHIPBOARD SCIENTIFIC PARTY	120	CARL, S.A.	194	CAVA, D.	175
CALMELS, P.	147	CARLIE, G.	82	CAVALERI, L.	267
CALON, T.	119	CARLSON, B.	135	CAVALLIERI, D.J.	170
CALUZ, F.	195	CARLSON, C.	217, 236	CAVALLO, A.	269, 270
CALPINI, B.	228, 261	CARLSON, C.A.	163	CAVE, M.	111, 112
CALTAYUD, A.	229	CARLSON, C.W.	240	CAYAN, D.	181
CALVER, A.	270	CARLSON, R.	237	CAYET, A.	158
CALVERT, P.	152	CARLSON, R.W.	237, 239	CAYET, S.	158
CALVET, J.-C.	146, 157, 176	CARME, S.	202	CAYOL, V.	92
CALVET, J.C.	157	CARMINATI, E.	64	CAYRE, O.	65
CALVETE, D.	263	CARMONA, E.	88	CAZENAVE, A.	124, 128, 129
CALVO, E.	229	CARMONA, X.	92	CAZZARO, R.	271
CAMACHO, J.C.	125, 130	CARNEC, C.	126	CEBALLOS, A.	153
CAMASSI, R.	65, 274	CARNEVALE, G.	266	CECCA, F.	102
CAMBERLIN, P.	65	CARNEVALI, M.	150	CECCHINI, S.	225
CAMERLENGHI, A.	90	CARPENTER, L.	194, 195	CECIC, I.	274
CAMERON, D.S.	269	CARPENTER, L.J.	195	CEDERLOEF, U.	168
CAMERON-SMITH, P.J.	239	CARR, F.H.	256	CEDERLÖF, U.	168
CAMMAS, J.-P.	180, 231, 261	CARR, M.H.	237	CELARIER, E.A.	228
CAMMAS, J.P.	179	CARRACEDO, J.-C.	98	CELERIER, B.	78
CAMMERAAAT, L.H.	270, 271	CARRACEDO, J.C.	278	CELIA, A.	187
CAMPANA, M.E.	148	CARRARA, G.	117	CELLE, H.	145
CAMPBELL, J.	134	CARRASCO, J.M.	94	CELLO, G.	81, 89
CAMPILLO, M.	74, 79, 80, 123	CARRATALA, A.	178, 229	CELORIO, C.	109
CAMPIN, J.-M.	189	CARRERA, J.	140, 150	CENNI, N.	95
CAMPINS, J.	179	CARRERA, P.	149	CERISIER, J.C.	210
CAMPISTRON, B.	173, 174	CARRERA-RAMIREZ, J.	140	CERMAK, V.	65, 66, 269
CAMPLING, P.	154, 155	CARRETERO ALBIACH, J.C.	200	CERQUEIRA, M.A.	199
CAMPOS, J.	123	CARRICO, C.M.	229	CERTEL, R.	103
CAMPOS, J.F.	164, 165	CARRIERES, T.	170	CERV, V.	114
CAMPOS, R.	139	CARRILHO, F.	88	CESARI, D.	268
CAMPOS-COSTA, A.	276	CARRIO SCHAFFHAUSER, E.	109	CESARI, R.	177, 259
CAMPS, P.	97	CARROLL, J.A.	67	CESARI, V.	191
CAMPUZANO-JOST, P.	194	CARROLL, M.	163	CESARINI, C.	168
CAMY-PEYRET, C.	227	CARROLL, M.R.	94, 95	CESCA, S.	70
CANABATE, M.	91	CARROZZO, M.T.	103	CEULEMANS, R.	177
CANALES, J.P.	115-117	CARSLAW, K.S.	227	CHABANNA, J.	160
CANALES, M.	109	CARSLAW, N.	196, 197	CHABOUREAU, J.-P.	180
CANAS, J.A.	91	CARSWELL, A.I.	208	CHADHA, R.K.	110
CANAS, J.A.	103, 276, 277	CARTON, X.J.	168, 266	CHADOEUF, J.	148
CANDE, S.C.	119	CARTON, X.	266	CHAFFARD, V.	108
CANDELA, L.	142, 156	CARTWRIGHT, J.A.	111	CHAGNON, G.	241
CANDER, L.R.	219	CARTWRIGHT, J.H.E.	259	CHAIKOVSKY, I.	114
CANDER, L.J.R.	219, 220	CASADEI, F.	91	CHAIX, L.	195
CANDON, L.	100	CASADIO, S.	174, 261	CHAIZY, P.A.	214
CANEPA, E.	178	CASALE, G.R.	228	CHALLINOR, A.J.	174
CANEVA, G.	278	CASALE, R.	269	CHALON, J.P.	179
CANIAUX, G.	177, 181, 201	CASANAHOVA, I.	245	CHALOV, S.V.	213
CANIZARES, R.	201	CASAS, A.	77, 105, 106, 115, 155, 276	CHAMBAT, F.	236
CANNAT, M.	116, 119	CASELLES, J.O.	276	CHAMBRES, D.P.	128
CANNON, P.	210	CASERO, N.	116	CHAMILLET, J.	109
CANNON, W.H.	135	CASERTA, A.	89, 90, 277	CHAMINE, H.I.	80
CANOSA-MAS, C.E.	194, 195	CASIERI, A.	159	CHAMOT-ROOKE, N.	75
CANSI, Y.	66	CASITAS, S.	172	CHAMOV, N.P.	80
CANTALAPIEDRA, I.R.	264	CASPARY, H.J.	269	CHAMPALBERT, G.	166
CAO, J.B.	222	CASSARDO, C.	193, 269	CHAMPEAUX, S.	215
CAPACCIONI, B.	95	CASTAGNOLO, D.	93, 94	CHAN, C.C.	246
CAPALDI, G.	93	CASTALDINI, D.	276	CHANCE, K.V.	225
CAPARRINI, F.	279	CASTANHEIRA, J.M.	191	CHANDLER, R.E.	268
CAPDEROU, M.	184	CASTELLANO, M.	88, 92	CHANG, C.-P.	81
		CASTELLARI, S.	129, 172, 173, 259	CHANIN, M.L.	193
		CASTELLON, A.	168	CHANNELL, J.E.T.	63, 64, 98

CHANTEUR, G.	222	CHOTOO, S.	214	CLOUTIER, P.	236, 240
CHANTURIA, A.	264	CHOUET, B.	93	COBBOLD, P.R.	82
CHANZY, A.	146, 148, 157	CHOUKROUNE, P.	102	COCCO, M.	74, 75, 88-90, 275
CHAO, B.	122	CHOULIARAS, G.	272	COCHARD, A.	88
CHAO, B.F.	127, 133	CHOWDHURY, R.N.	270, 271, 276	COCHONAT, P.	120
CHAO, Y.	104, 125, 126, 132	CHRISTENSEN, C.S.	186	COCHRAN, J.R.	116
CHAPMAN, C.	237	CHRISTENSEN, J.H.	169	COCINA, O.	92
CHAPMAN, N.R.	118	CHRISTENSEN, S.	140	CODINA, R.	95
CHAPMAN, R.	118	CHRISTENSEN, T.H.	149	CODRESCU, M.	218
CHAPMAN, S.C.	222	CHRISTENSEN, T.R.	174	COE, H.	195-197
CHAPRON, B.	182	CHRISTENSEN, TH.H.	149	COE, J.A.	279
CHARABBA, C.	93	CHRISTENSEN-DALSGAARD, J.	214	COELHO, D.	112
CHARLET, L.	151	CHRISTIENSEN BARLEBO, H.	141	COEUR, C.	229
CHARNEY, J.J.	180	CHRISTIENSEN, B.	230	COGNARD-PLANQ, A.L.	154
CHARONNAT, X.	80	CHRISTIDIS, N.	193	COHARD, J.-M.	185
CHARVATOVA, I.	225	CHRISTIE, D.M.	116	COHEN, H.	143
CHARVIS, PH.	115	CHRISTL, M.	163	COHEN, S.C.	81
CHASSEFIERE, E.	248	CHRISTOPH, M.	165, 193	COHEN, Y.	105
CHATSKAYA, V.A.	216	CHRISTOVA, C.	82, 272	COHEN-SOLAL, E.	183
CHAUKI, H.	146	CHRONOPOULOS, G.	229, 230, 280	COLANGELI, L.	242, 244, 247
CHAUMAT, L.	258	CHU, H.-T.	274	COLAS, E.	157
CHAUVIN, A.	82, 103, 104	CHUBARENKO, I.P.	152	COLAS, F.	172, 239
CHAUVIN, F.	192	CHUGUNIN, D.	220-222	COLBECK, I.	280
CHAVANIS, P.H.	248, 266	CHUGUNIN, D.V.	221	COLES, W.A.	213
CHAVARRIA, L.	276	CHUST, T.	223	COLIN DE VERDIERE, A.	161, 162
CHAZETTE, P.	184, 280	CIACCIO, M.G.	93	COLIN, C.	190
CHEILLETZ, A.	63	CIANCA, A.	163	COLLERAN, J.	76
CHELIDZE, T.	257	CIANETTI, S.	64	COLLIER, J.	68
CHEMENDA, A.	81, 82	CIARALLO, A.	104	COLLINS, G.	237
CHEMINEE, J.L.	95, 278	CIARAPICA, L.	152	COLLINS, M.	193, 239
CHEN, G.	264	CIARAVELLA, A.	213	COLLINS, W.J.	197, 198, 225, 230, 233
CHEN, J.L.	128	CIATTI, E.	93	COLLOT, J.-Y.	70, 117
CHEN, K.-J.	87, 88, 104	CIAVOLA, P.	279	COLOM, P.	243
CHEN, S.	181	CIBIN, U.	101	COLOMBO, O.L.	130
CHEN, Z.	124	CICCIOLI, P.	186, 187	COLOMBO, T.	179
CHENG, M.K.	104	CICCIOLLI, P.	186	COLOMINA, I.	123
CHEPFER, H.	184	CICCOTTI, M.	94	COLONY, R.	169, 171
CHERBLANC, F.	157	CICUENDEZ, J.I.	77	COLWELL, F.S.	118
CHEREMSHYNSKY, M.	136	CID, J.	276	COMAS, M.C.	63, 70, 120
CHERKACHEV, G.	115, 117	CIERPKA, K.	213, 214, 245	COMBES, M.	239
CHERMANNE, B.	176	CIESLIK, S.	186	COME, J.M.	158
CHERMANNNE, B.	176	CIFCI, G.	118, 119	COMES, F.J.	197
CHERNIAVSKI, V.	111	CIFEI, G.	76	COMISO, J.C.	170
CHERNIKOV, G.	265	CIFELLI, F.	274	COMPAGNUCCI, R.	182
CHERNIKOV, G.P.	265	CIMINI, G.B.	89, 93	COMPERE, F.	158
CHERNJAVSKI, A.	273	CIMINO, G.	242	CONAN, P.	199
CHERNOCON, V.	136	CINAR, H.	70	CONANGLA, L.	173
CHERNOGOR	210	CINI-CASTAGNOLI, G.	225, 245	CONDESSO MELO, M.T.	142
CHERNOGOR, L.F.	210	CINTI, F.	90	CONDOMINES, M.	95
CHERNOOK, V.I.	155	CIONI, R.	95, 104, 278	CONNELLY, L.J.	143
CHERNOV, YU.K.	272, 274, 276	CIPAKOVA, A.	148	CONNERNEY, J.E.P.	236, 240
CHERNOVA, I.Y.	109, 110	CIPOLLA, F.	279	CONNOLLEY, W.M.	170, 171
CHERNY, A.	105	CIPOLLARI, P.	102	CONTADAKIS, M.E.	272, 273
CHERNYAGA, P.	137, 138	CIRAULO, L.	219	CONTICELLI, S.	95
CHERNYAKOV, S.M.	210, 211	CITTERIO, A.	156	CONTRUCCI, I.	79, 86, 87, 115
CHERUBIN, L.	168	CIUFFI, S.	117	CONVERSANO, R.	172, 173
CHERY, J.	77, 78, 82, 134	CIVITARESE, G.	199	CONWAY, P.	179
CHESSA, P.	178	CIZKOVA, H.	68	CONZELMANN, V.	236
CHEVALIER, C.	120, 260	CLAES, P.	247	COOK, A.C.	251
CHEVREL, S.	245	CLAMOND, D.	264	COOK, D.	250
CHIAN, D.	116	CLAPES, J.	103, 276	COOK, G.T.	199
CHIARABBA, C.	89, 93	CLAPS, P.	145	COOK, K.H.	188
CHIARALUCE, L.	89, 90	CLARK, D.A.	96, 97	COOLEY, R.L.	140
CHICARRO, A.F.	237	CLARK, D.B.	155, 188	COOPER, S.	135
CHICHININA, T.I.	88	CLASSEAU, N.	123	COORAY, V.	227
CHIERICI, M.	170	CLASSEN, H.-T.	214, 223	COPIN-MONTEGUT, G.	198
CHIGIRINSKAYA, Y.	215, 255	CLAUD, C.	180	COPPA, U.	277, 278
CHILDERS, V.A.	130	CLAUSER, C.	110	CORAZZA, M.	110
CHILLA, F.	253	CLAUSTRE, H.	204, 205	CORBUS, C.	270
CHILSON, P.	208, 231	CLAVAUD, J.-B.	110	CORDOBA, D.	86, 115, 116
CHINN, D.S.	124, 130	CLEMENS, J.D.	76	CORDOLA, M.	203
CHIOZZI, P.	68	CLEMENT, A.C.	183	CORELA, C.	264, 265
CHIPPERFIELD, M.	209, 226, 227, 232, 262	CLEMENT, P.	143	CORJON, A.	233-235
CHIPPERFIELD, M.P.	209, 228	CLEMENTE, S.	277	CORMIER, V.F.	69
CHIRABBA, C.	70	CLEMITSHAW, K.C.	196, 197	CORN, M.	260
CHIRINO, E.	142, 143	CLEMMONS, J.H.	67	CORNELIS, C.	146
CHITALADZE, D.	269	CLENNELL, B.	113, 118	CORNEN, G.	116
CHKHETIANI, O.G.	179, 265	CLERBAUX, C.	225	CORNET, F.H.	94
CHMARZYNSKI, P.	115	CLERC, V.	243	CORNOU, C.	89, 90
CHO, J.Y.-K.	260	CLIFFORD, M.	172, 173	CORRADO, G.	277, 278
CHOI, W.	208	CLINT, O.C.	112	CORRAL ALEXANDRI, C.	270
CHOLLET, J.P.	261	CLOETINGH, S.	63, 64, 72-74, 77, 85	CORREARD, S.	266
CHOMETTE, O.	177	CLOETINGH, S.A.P.L.	73	CORREDOR, R.	125, 126
CHORNAY, D.J.	211	CLOTHIER, A.	145	CORREIA GUEDES, J.H.	277
CHOTOO, K.	213, 245	CLOUGH, S.	180	CORREIA, A.	65, 66, 113
		CLOUGH, S.A.	179	CORREIG, A.M.	92, 257

CORSELLI, C.	65	CROSSLEY, J.F.	193	DANELIA, R.	173
CORSI, A.	86, 87	CROVISIER, J.	243, 247, 248	DANILOV, S.	265, 266
CORSINI, A.	279	CROWLEY, J.N.	193-195	DANNE, O.	184
CORTADA HINDERSIN, F.	146	CROZIER, M.J.	271	DANNOWSKI, R.	156
CORTE-REAL, J.	107, 128, 144, 170, 190	CROZIER, M.	271	DANOBEITIA, J.J.	86, 115, 116
CORTE-REAL, J.A.M.	164	CRUIKSHANK, D.P.	239, 247	DANOVARO, R.	199
CORTE-REAL, J.M.	145	CRUSEM, R.	66	DANZER, J.	149
CORTES, A.	77	CRUTZEN, P.J.	186, 195	DARBOUX, F.	143, 158
CORTHETAS, J.M.	163, 167	CRUZ, A.	159	DARBY, M.S.	169
CORTI, G.	277	CRUZ-SANJULIAN, J.J.	142, 143	DARIN, C.-F.	133
CORTI, S.	193	CSIKY, O.	187	DARMAIS, S.	186
COSCA, M.	63	CUBASCH, U.	183	DAROT, M.	109
COSENTINO, D.	102	CUCCI, L.	90	DARR, D.	125, 126
COSIN, S.	187, 188	CUCURULL, L.	219	DARRACQ, D.	234, 235
COSKUN, N.	103	CUENA, J.	279	DARROZES, J.	74, 111
COSOVANU, M.	145	CULLEN, H.	164	DASSING, R.	135
COSOVIC, V.	64	CULTERA, G.	89	DATIN, R.	157, 268
COSTA, C.H.	279	CULTRERA, G.	89, 90, 277	DATURI, C.	74
COSTA, G.	89	CUMMINS, P.R.	70	DAUBER, B.C.	231
COSTA, J.	213, 214, 242	CUNEY, M.	79	DAUPLEY, X.	111
COSTANZO, C.	184	CUNHA, S.	130, 200, 201	DAUTEUIL, O.	70, 75, 115
COSTANZO-ALVAREZ, V.	99	CUOMO, V.	252, 272	DAUTREBANDE, S.	270
COSTE, P.	244	CURDT, W.	224	DAUTRIA, J.M.	96, 97
COSTER, A.J.	129	CURMI, P.	157	DAVILLE, A.	69
COT, C.	226	CURRY, A.G.	164, 165	DAVENPORT, B.	163
COTON, F.	134	CURRY, R.	164	DAVES, B.	174
COTRIM, S.	142	CURTIS, D.	236	DAVID, C.	103, 108, 109, 232, 262
COTTE, N.	80	CURTIS, D.W.	240	DAVIDSON, G.	108
COTTER, E.	194, 195	CURTIS, P.	176	DAVIDSON, L.D.	150
COTTIN, H.	244	CURTIS, S.A.	67	DAVIES, A.M.	200
COTTON, F.	74, 123	CUSTODIO, E.	142	DAVIES, G.R.	95, 246, 248
COUDRAIN-RIBSTEIN, A.	141, 146, 157, 158	CUVELIER, C.	187	DAVIES, H.C.	165, 179, 180
COULLIETTE, C.	258, 259	CUVIER, S.	139	DAVIES, J.	200
COURBOULEX, F.	86, 88-90, 123	CUYPERS, M.	140	DAVIES, J.A.	196, 209
COUREN, M.	160	CUZZOLA, V.	261	DAVIES, J.K.	243
COURJAULT-RADE, P.	74	CZAJA, A.	164, 165	DAVIES, M.A.	122
COURRIOUX, G.	79, 80	CZARNECKA, K.	137, 138	DAVIES, P.	81
COURTIER, PH.	201	CZARNECKI, K.	136-138	DAVIES, T.D.	179
COURTIER, R.	202	CZARNECKI, L.	136	DAVILA, J.M.	134
COURTIN, R.	239, 247	CZECHOWSKY, P.	231	DAVIS, A.	184, 185, 254, 257
COURTNEY, M.	186	CZEGKA, W.	112	DAVIS, G.R.	246-248
COUSIN, I.	140	CZUBA, W.	83, 84	DAVIS, J.L.	71, 133, 134
COUSTENIS, A.	239, 243, 247, 248	D'AGOSTINO, N.	75	DAVIS, P.M.	87
COUTAND, I.	82	D'ALESSIO, G.	93	DAVIS, R.	118
COUTANT, O.	74, 91	D'AMBROSIO, M.	166	DAVISON, I.	76
COUTINHO, M.	280	D'AMICO, V.	274	DAVY, P.	74, 139, 143, 153, 157
COUVERT, P.	184, 192	D'ANDREA, F.	255	DAWAI, T.	266
COVEY, C.	183	D'ODORICO, P.	252	DAWSON, J.M.	223
COWARD, A.	168	D'ORTENZIO, F.	172	DAWSON, P.	93
COWARD, A.C.	163	D'USTON, C.	236, 240	DAY, S.J.	278
COWARD, M.P.	85	DA SILVA, A.	203	DAYDOU, Y.	245
COWLEY, S.W.H.	217	DA SILVA, A.M.	203	DAYU, G.	276
COX, C.M.	104, 124, 130	DACAMARA, C.	145	DCHANDOL, P.	91
COX, R.A.	194-196	DACAMARA, C.C.	107, 189, 191	DE ALTERIIS, G.	74
COX, R.M.	211	DACH, R.	126, 128	DE BACKER, L.W.	141
COY, L.	207	DACHEV, CHR.	119	DE BEEK, R.	226, 227
CRAIG, G.C.	178, 192, 204, 230, 231, 239	DACHEV, TS.P.	211, 218	DE BERGH, C.	239, 247
CRAMBES, C.	92	DADIC, V.	169	DE BOER, C.	99
CRAMER, N.F.	216	DADOU, I.	126	DE BOVEE, F.	199
CRANE, K.	117	DAGESTAD, A.	151	DE CAROLIS, G.	171
CRANE, S.B.	144	DAGLEY, P.	103	DE CHABALIER, J.-B.	81
CRASSIER, V.	178	DAHAN, O.	147	DE CHABALIER, J.B.	123
CRAVEN, J.A.	92	DAHL, O.C.	131	DE CUEVAS, B.A.	124, 162
CRAWFORD, W.C.	117	DAHL-JENSEN, T.	116	DE DREUZY, J.R.	139
CREASEY, D.J.	196, 197	DAHLBACK, A.	228	DE F. FORSTER, P.M.	193
CREDNER, T.	242	DAHM, C.N.	148	DE FELICE, P.	189
CREER, K.	65	DAHM, T.	91, 93	DE FERAUDY, H.	221
CREMERS, A.B.	66, 67	DAHMEKE, A.	141, 150	DE FOUQUET, C.	140
CREMONA, G.	122	DAI QI-CHAO	122	DE FRANCESCHI, G.	219
CREPEL, O.	184	DAIGNIERES, M.	71	DE FRANCO, R.	86, 87
CREPON, M.	172, 173	DALIBART, M.	244	DE GORI, P.	93
CRESCIMANNO, G.	159	DALL'AGATA, L.	154	DE GRAAUW, T.	246, 248
CRETAUX, J.F.	124, 128	DALLA FONTANA, G.	271	DE GRAAUW, TH.	247, 248
CREUTIN, J.-D.	145, 157	DALLEORE, C.	247	DE GROEN, M.M.	155
CREUTIN, J.D.	153, 157	DALMAU, L.	148	DE JONG, C.D.	134
CREWELL, S.	184	DALPANE, E.	192	DE JONGE, A.	209
CRIMINISI, A.	143	DALY, L.	104	DE KEYSER, J.	212, 213, 217
CRISCI, A.	144	DAMERIS, M.	207, 208, 226, 233	DE LA NOE, J.	209, 226, 227
CRISE, A.	172, 260	DAMHUIS, A.A.	130	DE LA TORRE, L.	189
CRISP, D.	239, 249	DAMM, P.E.	164, 165	DE LASSUS, H.	243
CRISP, J.	249	DAMM, V.	117	DE LAZZARI, A.	199
CRISPI, G.	172, 260	DAMMASCH, I.	225	DE LEON, A.	163, 168
CRISTEA, P.	106	DAMMASCH, I.E.	224	DE LUCA, G.	89, 93, 277
CROKE, B.	239	DANCKWARDT, E.	105	DE MARSILY, G.	139-141
CROSATO, A.	119	DANDO, P.	200	DE MARTINI, P.M.	90, 274
		DANDONNEAU, Y.	166	DE MEY, P.	125, 172, 201

DE MICHELE, C.	255	DELOR, C.	106	DIAS, J.	161
DE MIRANDA, A.P.	162, 166	DELTEIL, J.	70, 115	DIAUR, N.I.	108
DE MONTETY, A.	181	DELVA, M.	240, 241	DIAZ DEL RIO, G.	161
DE MORAIS, A.	236	DELVAUX, D.	72, 74, 78	DIAZ, E.	159
DE MUER, D.	230	DELWICHE, M.	118	DIAZ, F.	172, 199
DE NATALE, G.	92-94, 277	DEMEDYUK, M.	137, 138	DIAZ, J.	86, 116
DE PERINI, V.	137, 138	DEMEKHOV, A.G.	216	DIAZ-NAVEAS, J.	115
DE RIDDER, K.	155, 178	DEMETRIADES-SHAH, T.H.	176	DICKEY, J.	132
DE ROSNAY, P.	144	DEMETS, C.	81	DICKEY, J.O.	104, 127, 128
DE RUBEIS, V.	274, 278	DEMIA NOV, G.	83, 84	DICKSON, F.W.	94
DE RUDDER, A.	226	DEMINA, M.	106	DIDELLE, H.	166
DE RUIJTER, W.P.M.	162	DEMIR, C.	81	DIDON-LESCOT, J.F.	154, 160
DE SANTIS, A.	106, 114	DEMIROV, E.	259	DIEDHIOU, A.	188, 189
DE SMET, J.H.	92	DEMOND, A.H.	141	DIEGUES, J.P.	164
DE SWART, H.E.	263	DEMOULIN, P.	225	DIEKKRÜGER, B.	146
DE VERNAL, A.	189	DENGLER, M.	161	DIELS, J.	147
DE VICENTE, G.	64, 77	DENIS, C.	104, 120, 121	DIELS, L.	246
DE VIRON, O.	132	DENIS, M.	204, 205	DIERKES, F.	150
DE VRIES, J.J.	142, 146, 147	DENK, T.	237	DIERMANSE, F.	146
DEAN, S.M.	116, 149	DENT, W.R.F.	243	DIETERICH, C.	162
DEBAYLE, E.	69, 87	DENTENER, F.J.	225, 233	DIETERICH, CH.	202
DEBEGLIA, N.	79	DENYS, L.	122	DIETERICH, J.	92
DEBERNARD, J.	263	DEPLUS, C.	70, 117, 278	DIETRICH, M.	89, 90, 108, 112
DEBREU, L.	201	DEQUE, M.	204	DIETRICH, R.	77, 122, 126, 128
DEBRUYN, W.	280	DERDER, M.	102	DIETRICH, S.	178, 179
DEBSKI, W.	90	DERGACHEV, A.A.	271	DIJKSTRA, H.A.	162, 165, 191
DEBUS, S.	228	DERGACHEV, V.A.	65, 189	DIKOV, YU.P.	243, 244
DECKERS, J.	155	DEROME, J.	203	DILEEP KUMAR, M.	199
DECONINCK, J.-F.	100	DEROUAULT, J.	244	DILL, R.	133
DEDIEU, G.	107	DERRICK, S.	96	DILLES, J.H.	95
DEDMAN, E.R.	241	DERVIN, P.	134	DILLISSE, I.	69
DEE, D.	203	DERWENT, R.G.	197, 198, 230, 233	DILLON, W.	118
DEEBES, H.	106, 107	DESANTIS, L.	90	DILLON, W.P.	118
DEFER, E.	202, 234	DESAULNIERS-SOUCY, N.	253	DIMOU, G.	145
DEFORREST, C.	213, 225	DESCAMPS, P.	247	DINESEN, A.R.	250, 251
DEFRAIGNE, P.	133	DESCATOIRE, F.	234	DING, X.L.	131
DEGENHARDT, W.	209	DESCHAMPS, A.	80, 86, 88, 89, 93	DINTRANS, B.	257
DEGLORIA, S.D.	153	DESCHAMPS, P.Y.	126	DIONGUE, A.	188
DEGNAN, J.	130, 135	DESJARDINS, R.L.	175	DIORDIEV, K.I.	170
DEGNAN, P.J.	139, 140	DESPAN, D.	123	DIRKZWAGER, J.	73
DEGORSKA, M.	228, 230	DESPIAU, S.	199	DIRKZWAGER, J.B.	73
DEGRAZIA, G.	174	DESPOIS, D.	243	DITTMER, J.	200, 201
DEHANDSHUTTER, B.	78	DESROZIER, G.	180, 181	DITTRICH, A.	143
DEHANN, D.O.	195	DESRUES, J.	109	DITTRICH, G.	103
DEHANT, V.	132, 133	DESSSEN, J.	174	DIXON, K.W.	183
DEHGhani, G.A.	115	DESSSEN, J.	173	DIXON, T.	81
DEICHMANN, N.	88	DESSSEN, O.	233	DIXON, T.H.	95, 278
DEIDDA, R.	254, 255	DESVOIVRES, E.	242	DJELLIT, H.	102
DEKEYSER, I.	202, 267	DETHLOFF, K.	256	DJENIDI, S.	164, 165, 172, 173
DEKKER, S.C.	146	DETHOF, A.	231	DLC STUDY GROUP	116
DEKKERS, M.J.	96, 97, 99, 101	DETRICK, R.	116	DOAKE, CH.	128
DEKORP RESEARCH GROUP	80	DETRICK, R.S.	115, 117	DOBLAS-REYES, F.J.	204, 226, 227
DEKORP WORKING GROUP		DEURER, M.	148	DOBROLIUBOV, S.	182
"NORTH GERMAN BASIN"	84	DEUS, A.	69	DOBROLIUBOV, S.A.	161, 162, 181
DEKORP/URSEIS RESEARCH GROUP	86, 87	DEVAUX, J.P.	68	DOBROWOLSKI, A.	136, 137
DEL GAUDIO, C.	277, 278	DEVEAUX, M.	169	DOCAMPO, C.	267
DEL GAUDIO, V.	275, 276	DEVENEZIA, D.	71	DOCKRILL, S.	103
DEL GUASTA, M.	228	DEVENON, J.L.	167, 202	DODD, N.	263, 267
DEL NEGRO, C.	278	DEVERCHERE, J.	77, 78, 86, 115	DODSON, A.H.	129, 134
DEL PEZZO, E.	88, 278	DEVEY, C.W.	115	DOIN, M.-P.	68
DEL PINO, J.	280	DEVOOGHT, J.	141	DOKE, T.	212, 217
DEL POZO, C.F.	209, 218	DEVOTI, R.	72, 124	DOKUCHAEV, V.P.	258
DELABOUDINIERE, J.P.	225	DEWAR, W.K.	166	DOLECKI, L.	99
DELACOURT, C.	123	DEWDNEY, P.	135	DOLEJS, D.	94
DELANEY, P.T.	93	DEWHURST, D.N.	111	DOLGOPOLOW, A.	136, 137
DELANGHE, D.	100	DEWITT, D.G.	183	DOLINA, I.	267
DELANNEE, C.	225	DEZEEUW, D.L.	211, 213, 240	DOLNIKOV, G.G.	243, 244
DELAY, F.	158	DI BELLA, L.	64	DOLZHANSKII, F.V.	265, 266
DELCLAU, F.	188	DI BELLO, G.	272	DOMACK, E.W.	90
DELCOURT, D.	220, 222, 223	DI BONA, M.	89	DOMASCHK, U.	87
DELCOURT, D.C.	221, 222	DI CORI, M.	129	DOMBROWSKY, E.	124, 200
DELECLUSE, P.	182, 191	DI DONATO, G.	71	DOMBROWSKY, E.	124, 200
DELEERSNIJDER, E.	167	DI GIAMMARCO	153	DOMENICHINI, L.	279
DELERUE, J.F.	109	DI GIOVAMBATTISTA, R.	273	DOMINGUEZ, T.	91
DELEUIL, M.	249	DI GIUSEPPE, F.	185, 186	DOMINH, K.	129
DELEVILLE, S.	167	DI GREGORIO, S.	271	DOMMENGET, D.	190
DELGADO, C.	178, 199	DI LIBERTO, V.	95	DONAHUE, K.A.	164, 165
DELGADO-ARGOTE, L.A.	115	DI MAURO, D.	114	DONATI, S.	274, 277
DELGADO-HUERTAS, A.	159	DI SABATINO, S.	175	DONATO, E.	187
DELISI, D.P.	234, 266	DI VITO, M.A.	278	DONG, D.	104, 128
DELLA CORTE, V.	137, 138	DIA, A.	151, 157	DONNADILLE, J.	180
DELLA CROCE, N.	199	DIAGOURTAS, D.	277	DONOHUE, K.A.	161
DELLA MONICA, P.	225, 245	DIAMENT, M.	70, 80, 117, 122, 278	DOOS, K.	168
DELLA VEDOVA, B.	65, 86	DIANSKY, N.A.	228	DORBATH, C.	82
DELOBBE, L.	192	DIAS, J.A.	267	DORBATH, L.	123
		DIAS, J.M.	267	DORESSOUNDIRAM, A.	246, 248



DORIGNY, A.	103	DULAC, F.	280	EHRENFREUND, P.	243, 244
DÖRING, U.	141	DULK, G.	242	EHRHARDT, J.-J.	151
DORN, H.-P.	196, 197, 204-206	DULK, G.A.	241, 242	EHRHARDT, J.J.	151
DORN, H.P.	205, 206	DULLO, W.-C.	236	EHRLICH, R.	108
DÖRNBRACK, A.	228	DUMA, G.	68, 107	EICHMANN, K.-U.	226, 227
DOROFEEVA, V.A.	248	DÜMENIL, L.	146	EICKE, N.	230
DOROFYUK, N.I.	65, 66	DUMMEL, A.	249-251	EIDELMAN, A.	178, 179, 265
DORONINA, T.	266	DUMON, J.-C.	144	EIDMANN, G.	208
DÖRRER, E.	250, 251	DUMOULIN, C.	68	EIDSVIK, K.J.	169, 234, 235
DÖRRER, S.	204, 205	DUNAIEV, N.	170	EIFF, O.	258
DOS REIS, T.	86, 120	DUNBAR, M.	160	EIFF, O.S.	258
DÖSCHER, R.	162	DUNBAR, M.J.	156	EIFLER, W.	259, 263
DOSER, D.	275	DUNCOMBE RAE, C.	162	EIGENHEER, A.	200
DOST, B.	85, 86	DUNKERTON, T.J.	257	EIGES, P.	220
DOTTO, E.	246, 248	DUNLOP, D.J.	96, 97	EIGHMY, J.	104
DOUCELANCE, R.	115	DUNN, P.J.	134	EINAUDI, F.	117
DOUDKIN, F.	212, 273	DUPEYRAT, L.	68, 238	EINSTEIN, H.	140
DOUGHERTY, M.	213, 241	DUPLESSY, J.-C.	188-190	EISELE, F.L.	196, 197
DOUGHERTY, M.K.	240, 241	DUPLESSY, J.C.	189	EISENBLÄTTER, J.	91
DOUGLASS, A.	207	DUPONT, E.	173, 174, 177	EISENREICH, M.	103
DOUGUEDROIT, A.	179	DUPRE, B.	157	EISWIRTH, M.	149
DOUSA, J.	137, 138	DUQUENNE, H.	131	EK, N.	232, 261
DOUTE, S.	243, 247	DURAN, J.J.	139	EKLUND, U.	220, 221
DOUTRIAUX-BOUCHER, M.	192	DURAND, N.	167	EKMAN, M.	71
DOUVILLE, H.	193	DURAND, P.	151, 153, 157, 174, 186	EKNES, M.	202
DOVETON, J.H.	110	DURMAN, C.F.	193	EKSTROM, G.	64, 65, 69, 89, 90
DOWDESWELL, J.A.	120	DURO, L.	141	EL AMRANI-PAAZA, N.	142, 143
DOWELL III, C.A.	256	DUROT, K.	158	EL BOUDALI, A.	196, 197
DOWNSON, M.	127	DUROURE, C.	184	EL ERAKI, M.	103, 106
DRAGO, A.	219	DURVILLE, J.-L.	270	EL-SHEMI, A.M.	106
DRAGONI, M.	74, 92, 93	DUTAUR, L.	186	ELANSKY, N.F.	197, 198, 226, 227
DRAKATOS, G.	272	DUVAL, A.-M.	277	ELBERN, H.	178
DRAKOPOULOS, P.G.	129, 173	DUVAL, P.	238	ELBERSKIRCH, J.	132
DRAMIS, F.	275	DUWE, K.	200	ELEND, M.	196
DRANGE, H.	162, 170, 260	DUXBURY, T.C.	241, 249, 251	ELFOUHAILY, T.	182
DREIBUS, G.	249, 251	DUYSTER, J.	109, 110	ELGERED, G.	129, 133
DRENNOV, A.F.	88, 271	DVORKIN, Y.	260	ELIASON, E.	250
DRESEN, G.	108	DWIPA, S.	114	ELIASON, L.	217
DREWES, H.	82, 133	DWIVEDI, B.N.	224	ELIET, V.	147
DREYER, M.	184	DWYER, I.	252, 253	ELLERMANN, T.	177
DRIDI-DHAOUADI, S.	149	DYER, D.J.	175	ELLIOT, M.	98, 189
DRIJFHOUT, S.	190	DYER, N.	95	ELLIOTT, C.	156
DRIJFHOUT, S.S.	190	DYKES, A.P.	143	ELLIS, S.	80, 81
DRITSCHEL, D.G.	168, 266	DYMENT, J.	82, 119	ELLISON, R.A.	123
DROBINSKI, P.	174	DZIEWONSKI, A.M.	69, 89	ELMING, S.-A.	68, 83, 96, 97
DROBNE, K.	64	EAMES, I.	258	ELMOUSSAOUI, A.	172
DROBZHEVA, YA.	264	EANES, R.	124	ELPHIC, R.C.	246
DROEGEMEIER, K.K.	256	EANES, R.J.	123, 124	ELPHICK, S.C.	113
DRÖGE, W.	223	EBEL, A.	178, 231, 233	ELSTE, T.	196, 197
DROLSHAGEN, G.	244	EBERHARDS, G.	144	ELTAHIR, E.A.B.	155
DROSSART, P.	239, 247	EBERLE, M.A.	69	ELUSTONDO, F.	244
DROSSINOS, Y.	252	EBERLI, G.P.	108	ELVINI, E.	201
DROZ, L.	120	EBERT, M.	151	EMANUEL, K.	181
DRÜEN, B.	179	EBINGER, C.	77, 78	EMANUEL, K.A.	179
DRUILHET, A.	176	EBINGER, C.J.	73, 74	EMARDSON, T.R.	133
DRUZHKOVA, N.	169	ECHEVIN, V.	201	EMELIANOV, M.	167
DS-1 SCIENCE TEAM	246	ECHTERNACHT, F.	114	EMERY, B.A.	211
DU PLESSIS, J.P.	109	ECHTLER, H.P.	81, 86	EMLOUSSAOUI, A.	164, 165
DU, J.	203	ECKART, P.	246	EMS WORKING GROUP	274
DUARTE, A.	187	ECKERT, S.	177, 187, 188	ENCRENAZ, T.	243, 246-248
DUARTE, M.	115	ECKMAN, R.S.	233	ENCRENAZ, TH.	239, 247, 248
DUBERTRET, G.	246	ECONOMOU, T.	249	ENDERLE, U.	80
DUBININ, E.	213, 220, 222, 240, 241	EDEL, J.B.	96, 97, 102	ENDO, M.	209, 210
DUBIS, L.	137, 138	EDER-HINTERLEITNER, A.	102, 103	ENEL ACCELEROMETRIC NETWORK WORKING GROUP	89
DUBOIS, C.	109	EDGINGTON, S.	248	ENELL, C.F.	227
DUBOIS, J.	253	EDMUNDS, W.M.	142, 147	ENGARDT, M.	203
DUBOIS, R.	196, 197	EDOUARD, S.	232, 261	ENGDAHL, E.R.	69
DUBOULOZ, N.	220-222	EDWARDS, E.	113	ENGEL, A.	230
DUBROVSKY, M.	193, 228	EDWARDS, J.M.	185, 230	ENGELAND, K.	146
DUBRULLE, B.	266	EDWARDS, J.N.	139	ENGELL-SOERENSEN, L.	91
DUBUS, L.	166	EDWARDS, N.R.	165	ENGESGAARD, P.	142, 151
DUBUY, F.	243	EDWARDS, R.A.	117	ENGFER, D.	234, 235
DUCET, N.	129	EERENS, H.	154	ENGLE, I.M.	240
DUCHARNE, A.	144, 146	EFFERSO, F.	66	ENGRAND, C.	243
DUCK, T.J.	208	EFIMOVA, G.A.	108	ENNINGHORST, K.	124
DUCREUX, J.	142	EFSTATHIOU, M.	229	ENOMOTO, T.	277
DUDAREV, O.V.	149	EGAL, E.	79	ENTEKHABI, D.	155
DUDENEY, J.R.	217	EGANOVA, I.A.	121	ENTZIAN, G.	226
DUDOK DE WIT, T.	216, 257	EGBERS, C.	256	EPARVIER, F.	224
DUDUKALOV, A.P.	147	EGEBERG, P.	118	EPELBAUM, M.B.	95
DUERMEIJER, C.E.	101	EGGER, J.	231	EPHISOV, I.I.	130
DUERR, M.	187	EGORKIN, A.	92	EPIFANI, E.	247
DUFRESNE, J.-L.	183, 193	EGORKIN, A.V.	88	ERARD, S.	237
DUFUMIER, H.	91	EGOROVA, T.	226, 227	ERBACHER, J.	65
DUGUY, B.	159	EGOZCUE, J.J.	277	ERDIK, M.	64, 65, 275
DUIJNISVELD, W.H.M.	148	EHHALT, D.H.	197, 198		

ERDÖS, G.	215	FÄH, D.	277	FERNANDEZ, F.	159
ERDURAN, M.	70	FAHR, H.-J.	213, 214	FERNANDEZ, F.J.	80
ERGENZINGER, P.	143, 156	FAHR, J.H.	214	FERNANDEZ, J.	70, 94
ERGUN, M.	76, 119	FAHRBACH, E.	170, 171	FERNANDEZ, J.M.	94
ERGUN, R.	217	FAHRUTDINOVA, A.N.	210	FERNANDEZ, M.	63-65, 70, 71, 73, 120
ERICKSON, G.M.	222	FAILLAT, J.P.	158	FERNANDEZ-CIRELLI, A.	156
ERIKSEN, T.	209	FAINBERG, J.	213	FERNANDEZ-TURIEL, J.L.	156, 157
ERKER, E.	136	FAIRHEAD, J.D.	73, 74	FERRACCIOLI, F.	77, 278
ERLANDSON, R.E.	217	FAIRHEAD, L.	183, 193	FERRACHAT, S.	263
ERLEBACH, P.	208	FALALAKIS, G.	81	FERRAN, A.	159
ERLENDSSON, P.	78	FALCK, E.	161	FERRAND, J.	199
ERMAKOVA, E.N.	216	FALEIRO, E.	254	FERRANDINI, J.	86
ERNI, D.	148	FALCO, O.G.	212	FERRANDIZ, J.M.	133
ERNSHAW, J.	113	FALLER, J.E.	278	FERRANTI, L.	191
ERNST, G.	185	FALLOWS, R.	213	FERRARA, A.	159
EROKHIN, E.	216	FALQUES, A.	263	FERRARA, V.	279
EROKHIN, N.S.	212, 253, 264, 265	FALZONE, G.	278	FERRARESE, S.	193
ERREA, M.P.	154	FANALE, F.P.	237	FERRARI, A.	174
ERSHKOVICH, A.I.	217	FANG, P.	129	FERRARI, D.	147
ERSHOV, A.V.	73	FANJUL, E.A.	200	FERRARI, E.	269
ERVENS, B.	186, 196	FANTINI, M.	178, 179	FERRARI, F.	86
ERZINGER, J.	277	FARAT, R.	186	FERRARI, L.	278
ESCANEZ, J.	163	FARGES, T.	209	FERRARIS, L.	268, 270
ESCARTIN, J.	115-117	FARIA JR.	223	FERRARO, C.	134, 136
ESCUARDIN-VIRUETE, J.	94	FARINA, F.	95, 278	FERRARO, L.	137
ESCUDIER, P.	200	FARISSIER, P.	269	FERREIRA, E.	267
ESKES, H.J.	226	FARMER, A.B.	113	FERREIRA, S.B.	149
ESMAEELI FARD, S.	68	FARRUGIA, C.J.	217	FERRELI, L.	89, 274
ESOP2 SCIENTIFIC TEAM	161	FASS, S.	150	FERRER, S.	124
ESPINOZA, F.	276	FASSBINDER, J.	102, 103	FERRERO, E.	174
ESPOSITO, E.	275	FASTOOK, J.L.	71	FERRIERE, K.	240
ESPOSITO, F.	244	FAUQUE, L.E.	279	FERRUCCI, F.	278
ESPOSITO, T.	277	FAUQUETTE, S.	189	FERRY, N.	181
ESSELBORN, S.	162	FAURE, M.	79, 80	FESCH, C.	141
ESTABROOK, CH.	69	FAURE, T.	184	FESER, F.	165
ESTALRICH, J.	142	FAUVE, S.	254	FESHCHENKO, E.YU.	212
ESTARELLAS, C.	179	FAVALI, P.	199	FEUCHTGRUBER, H.	246-248
ESTEBAN, M.	167	FAYNOT, L.	97	FEUERBACHER, B.	241
ESTEVE, V.	178, 199	FEATHERSTONE, W.E.	127, 131	FEUILLEBOIS, F.	234
ESTEVEZ, M.	158	FECHNER, C.	103	FEYEN, H.	147, 148
ESTEVEZ, C.	238	FECHNER, N.	117	FEYEN, J.	139, 147, 154, 155
ESTOURNEL, C.	172	FEDDER, A.	220	FIALA, M.	163
ESTRELA, T.	154, 155, 160	FEDDER, J.A.	221	FIANI, M.	131
ETCHEBER, H.	199	FEDDERS, B.	168	FICHEFET, H.	170
ETCHEVERS, P.	157	FEDERICI, G.	279	FICHEFET, T.	169, 189
ETIOPE, G.	199	FEDERICO, A.D.	68	FICHEFET, TH.	181, 183
ETLING, D.	208, 258	FEDERICO, A.	217	FICHTNER, H.	213, 214
EUGENIO-GONZALEZ, F.	167	FEDI, M.	105	FICKERT, J.	129
EUGSTER, S.	272	FEDORENKO, V.N.	219	FICKERT, S.	194, 195
EULENSTEIN, F.	141, 156	FEDORENKO, YU.P.	219	FIDALGO, L.	116
EUROBRIDGE SEISMIC WORKING GROUP	83	FEDOROFF, N.	102	FIDELIBUS, M.D.	142
EUROMOON TEAM	246	FEDOROV, A.	217, 220, 221	FIEDLER, F.	177, 178
EUROPROBE TESZ PROJECT PARTICIPANTS	84	FEDOROV, A.O.	86, 210	FIEG, K.	162
EUROSEISMOD GROUP	277	FEDOTOV, N.G.	221	FIEKAS, H.-V.	167, 168
EVA, C.	64, 82, 267	FEDULINA, I.	196	FIERLI, F.	227
EVA, E.	64	FEDUN, V.N.	218	FIGUERAS, S.	276
EVA, H.	107	FEHLMANN, R.	212	FIGURSKI, M.	136-138
EVANGELISTI, F.	179, 226, 227, 261	FEICHTER, J.	165, 179, 180	FILIBERTI, M.-A.	183
EVANS, A.D.L.	188	FEIGL, K.	183, 192, 208, 231	FILINA, A.G.	271
EVANS, D.A.	72	FEIJT, A.	123	FILIPPI, D.	68, 280
EVANS, J.	234, 235	FEIL, G.	123	FILIPPI, L.	93
EVANS, M.	104, 197, 232, 262	FEIR, B.	184	FINCHAM, A.	166
EVANS, M.J.	195	FEJER, B.G.	135	FINCHAM, A.M.	258, 259
EVANS, N.	76	FEJES, I.	135	FINE, N.	235
EVANS, S.G.	270, 271	FELDMAN, W.C.	209, 210	FINESCHI, S.	213, 225
EVENSEN, G.	201, 202	FELDMANN, H.	136	FINETTE, S.I.	263
EVERS, L.	86	FELLNER, A.	246	FINIZOLA, A.	277
EVISON, F.F.	272	FELLNER, W.	226, 227, 231	FINK, A.H.	188, 191
EVLOGIEV, J.	99	FELSKI, A.	136, 137	FINKLE, K.	176
EVSTAFJEV, O.V.	210	FENEBERG, B.	235	FINLAYSON-PITTS, B.J.	195
EWALD, S.	182	FENG, M.	136, 137	FINNE, K.	257
EWEN, J.	144	FENNELL, J.F.	230	FINZI-CONTINI, G.	86, 275
EXETIER, P.	134	FENOGGIO-MARC, L.	181	FIOCCO, G.	174, 261
EYMARD, L.	181, 184	FENTER, F.F.	216, 217	FIORDELISI, A.	114
EYRING, V.	209	FENWICK, D.	129	FIORENTINO, M.	145
EZAT, U.	280	FERAUD, G.	195	FIORUCCI, P.	154
FABIAN, P.	197, 198, 207, 228, 230	FERETIS, E.	140	FISCHER, G.	163
FABIAN, P.	187, 188	FERGUS, T.	63, 68	FISCHER, H.	227, 230
FABIANO, M.	199	FERGUSON, I.J.	229	FISCHER, J.	142
FABRETTI, P.	117	FERGUSON, R.	156	FISCHER, K.D.	73
FABRIOL, H.	126	FERMI, M.	92	FISCHER, M.	183
FACCENNA, C.	63, 76	FERNANDEZ, R.	155	FISCHER, R.	91
FAGENTS, S.	237	FERNANDEZ, D.	72, 134, 136	FISCHER, R.G.	204, 205
FAGGIOLI, D.	172, 173		81	FISHER, Q.J.	113
			234, 235	FITAS, A.	88

FITZJOHN, C.	160	FOURRIE, N.	180	FUDA, J.L.	167, 199
FITZSIMMONS, A.	247	FOX, A.D.	124	FUHRER, K.	100
FIUZA, A.F.G.	167	FOX, D.N.	202	FUJI SCIENTIFIC PARTY	117
FJELDSKAAR, W.	71	FOX-RABINOVITZ, M.	202, 203	FUJII, R.	209, 210
FLAMANT, P.H.	174, 184	FRAEDRICH, K.	232, 257, 258, 261	FUJII, T.	118
FLAMENT, P.	166	FRAGALE, F.	255	FUJIMORI, K.	272, 273
FLASAR, F.M.	240	FRAILE, R.	234	FUJIMOTO, K.	108, 113
FLATHER, R.A.	200, 201	FRANCALANCI, L.	95	FUJIMURA, A.	245
FLECHSIG, C.	108	FRANCALANI, L.	95	FULCHIGNONI, M.	246, 248
FLECHSIG, CH.	108	FRANCESCHETTI, G.	89	FULIGNATI, P.	94, 95
FLECHTNER, F.	124, 135, 219	FRANCHETEAU, J.	117	FULLE, M.	247
FLEISCHMANN, O.C.	194, 195	FRANCIS, O.	71, 122	FÜLLEKRUG, M.	218
FLEISCHMANN, U.	162	FRANCK, S.	237	FULLER-ROWELL, T.J.	218
FLEITOUT, L.	68, 69	FRANCOIS, C.	157	FUNICIELLO, F.	274
FLENTJE, H.	228	FRANCOIS, L.	176	FUNICIELLO, R.	63, 75, 93
FLENTJE, P.	270, 271, 276	FRANCOIS, L.M.	176	FUNK, O.	184, 185, 230
FLETA, J.	276	FRANGOV, G.	279	FUNKQUIST, L.	200, 201
FLEURISSE, J.A.	276	FRANK, E.	271	FUNNICIELLO, R.	76
FLEURY, R.	219	FRANKE, B.	227	FUNVISIS TECHNICAL MEMBERS	277
FLINT, H.	184	FRANKE, D.	81	FURCOLO, P.	268, 269
FLENTJE, H.	196, 197	FRANKE, P.	129, 134, 136	FURGER, M.	175
FLOOD, R.D.	120	FRANKE, W.	83	FURLONG, K.P.	70, 71, 87
FLOR, J.-B.	258	FRANKENBERGER, J.A.	153	FUSELIER, S.	220
FLORES, A.	219	FRANKIGNOUL, C.	164, 165	GAB, S.	205, 206
FLORINDO, F.	64, 99, 100, 102	FRANKS, S.	146	GABALDA, G.	122, 278
FLORIO, G.	105	FRANSSON, A.	170	GABELLINI, E.	91
FLOSSMANN, A.I.	177, 186	FRANTZIS, X.	82, 134, 272	GABLE, C.W.	263
FLUDRA, A.	213	FRANZEN, A.	184, 208	GABRIEL, A.	224, 233
FLUEH, E.	115-117	FRAPE, S.K.	118	GABRIEL, G.	68, 106
FLUEH, E.R.	74, 115, 117	FRAPPORTI, G.	149	GABRIELSEN, R.	74
FLUGGE, M.	194, 195	FRASCARI, F.	260	GACZYNSKI, E.	83, 84
FLÜH, E.R.	87, 115	FRASER, B.J.	217	GADDIS, L.	249, 250
FLÜHLER, H.	147, 148	FRATANTONI, D.	162	GAEGGELER, H.	231
FLURY, M.	147	FRATTONI, M.	186	GAETA, F.S.	93, 94
FOCARDI, A.	271	FRAUNIE, P.	167, 259	GAFFET, S.	67, 86, 89, 90
FOCARDI, P.	271	FRECHET, J.	79	GÄGGELE, H.W.	194
FODOR, L.	74	FREDERIKSEN, S.	70	GAGNI, S.	150
FOELSCH, U.	129	FREDOW, M.	107	GAGNON, N.	203
FOHRMANN, H.	167	FREDRICH, J.T.	108, 109	GAGO, J.L.	99
FOING, B.H.	245, 246	FREDVIK, T.	213	GAILLARD, F.	200
FOKEN, TH.	174, 175	FREEMAN, K.S.	218	GAILLOT, P.	74, 111
FOLCH, A.	94, 95	FREEMAN, M.P.	217	GAILLOT, S.	160
FOLDVIK, A.	171	FREHERS, S.	84	GAK, E.Z.	66, 207
FOLKNER, W.M.	236, 249	FREI, C.	179	GALADINI, F.	90
FOLLAND, C.K.	165, 193	FREITAS, M.C.	267	GALAND, M.	217, 240
FOLTON, N.	160	FRENCH-NEPALESE IDYLLHIM		GALANI, E.	226, 227, 261, 280
FONSCCA, P.	80	TEAM	81	GALAPEAU, P.	243
FONT, J.	150, 166, 167, 259	FRENJE, L.	88	GALBIATI, G.L.	147
FONT, Y.	82	FRENZEL, B.	187	GALDEANO, A.	79, 80, 106
FONTAINE, B.	188	FREPOLI, A.	64	GALDIN, N.	78, 79
FONTAINE, D.	209-211, 215, 216	FRERICK, J.	225	GALDINI, F.	89
FONTAN, J.	186	FREY, H.V.	249	GALILEO AND ULYSSES DUST	
FONTI, S.	237	FREY, M.	81, 84	TEAMS	240
FOOT, J.S.	192, 280	FREY, S.	204, 205	GALILEO IMAGING SCIENCE	
FORBERICH, O.	197	FREYMUELLER, J.T.	81	TEAM	237
FORBES, J.M.	211	FRIBORG, T.	174, 176, 177	GALILEO IMAGING TEAM	237
FORGET, F.	238, 239	FRICH, P.	165	GALILEO NIMS AND SSI	
FORGET, P.	167	FRICKE, K.H.	207, 227	INSTRUMENT TEAMS	237
FORICHON, M.	183	FRIEDEL, R.	212	GALILEO SSI TEAM	237, 238
FORME, F.	211	FRIEDEL, S.	93	GALIMOV, E.M.	237
FORNI, O.	236	FRIEDERICH, P.	164	GALINDO, G.	156
FORRER, J.	174	FRIEDL-VALLON, F.	227	GALL, R.	179
FORSBERG, C.-F.	120	FRIEDRICH, K.	175, 185	GALLANI, M.	208
FORSBERG, R.		FRIEDRICH, R.	178	GALLART, F.	148, 152, 153
	83, 84, 127, 130, 131, 200, 201	FRIGESSI, A.	268	GALLART, J.	86, 87
FÖRSTE, CH.	129	FRIND, E.O.	149	GALLART, F.	152
FÖRSTER, A.	73, 110	FRISCH, U.	264	GALLAT, J.	86
FORSTER, C.	231	FRISON, T.W.	255, 256, 263	GALLE, C.	111
FÖRSTER, M.	218	FRITSCH, J.M.	180	GALLEE, H.	192
FORSTER, P.M. DE F.	230	FRITZ, B.	108	GALLET, Y.	97
FORSTER, S.	200	FRITZ, T.	216	GALLI, M.	225
FORSYTH, R.J.	213, 214	FRITZ, T.A.	217	GALLI, P.	89, 90
FORTE, A.M.	71, 127	FROELICH, C.	176	GALLO, J.	111
FORTEA, J.	280	FROHLICH, C.	177, 228	GALOPEAU, P.H.M.	243
FORTUIN, P.	230	FROIDEVAUX, C.	63	GALPERIN, Y.	220, 222
FOSSSEN, H.	74	FROIDEVAUX, L.	209, 226, 227	GALPERIN, YU.	221
FOSTER, J.C.	218	FROLOVA, N.S.	68	GALPERIN, YU.I.	221, 222
FOSTER, P.	229	FRUEHAUF, C.	146	GALPERIN, YU.L.	222
FOTIADIS, D.N.	219	FRUGONI, F.	199	GALSGAARD, K.	223
FOUCHE-ROGUEZ, S.	158	FRÜH, W.-G.	256	GALTEZKA, J.	134
FOUCHET, T.	241, 247	FRÜHAUF, C.	146, 176	GALTIER, S.	215
FOULGER, G.R.	78	FRUNEAU, B.	123	GALVANI, A.	90
FOUQUET, Y.	115	FU, S.Y.	217	GALVIN, A.	214, 245
FOURNIER, A.	253, 256, 259, 264, 266	FUCHS, J.	129	GALVIN, A.B.	213, 214, 224
FOURNIER, J.-D.	215	FUCHS, K.	76, 79, 80, 87	GAMBINO, P.	276
FOURNIER, R.	239	FUCHS, T.	139	GAMBIS, D.	132

GAMMELSROD, T.	171	GEDALIN, M.	215	GICCARDI, A.D.	279
GAMOND, J.F.	81	GEDNEY, N.	193	GIDASPOW, D.	93
GANACHAUD, A.	172	GEE, G.W.	147	GIDSKEHAUG, A.	130, 200, 201
GANAYE, V.	150	GEE, J.S.	65	GIEHL, H.	233
GANDOLA, F.	147	GEERAERTS, R.	99	GIERENS, K.	233
GANDOLFI, M.	279	GEGOUT, P.	128, 131, 132	GIESE, B.	245, 246, 251
GANDOLFI, S.	123, 277, 278	GEHRELS, J.C.	147	GIESE, P.	82
GANG, W.	123	GEISEN, S.	149	GIESE, U.	83
GANGULY, N.	118	GEISS, C.H.E.	99	GIEZ, A.	280
GAO, S.	87	GEISS, J.	214, 224, 242	GIGGENBACH, W.F.	118
GARAM, E.	176	GEISSLER, P.	237	GIJSBERS, P.J.A.	155
GARAMBOIS, S.	108, 112	GELENNE, P.	192	GIL, A.	91
GARATE, J.	123, 134	GELHARDT, F.	208	GILBERT, M.A.	159
GARCIA, A.	224	GELINO, C.	249	GILLE, J.C.	225
GARCIA, C.	143	GELINO, C.R.	249	GILLE, S.T.	125, 126
GARCIA, J.	104	GEMMER, L.	68	GILLOT, B.	235
GARCIA, M.A.	167, 168, 171	GENDREAU, N.	269	GILMOUR, I.	204
GARCIA, P.	250	GENDRON, E.	239	GILOD, D.	117
GARCIA, R.	139, 229	GENDT, G.	124, 134	GIMENEZ, E.	142
GARCIA, R.L.	176	GENEREUX, D.	140	GIMENO, L.	164, 165, 178, 179, 189, 229, 234, 235, 267, 269
GARCIA, R.R.	208	GENEYS, C.	199	GINCI, J.	77
GARCIA, S.	187, 188	GENIN, J.-M.R.	151	GINSBURG, G.	118
GARCIA-ARSTEGUI, J.L.	142, 143	GENIN, J.M.	151	GINZBURG, A.	74
GARCIA-CASTELLANOS, D.	73	GENNERO, M.C.	128, 129	GINZBURG, A.I.	167
GARCIA-HARO, F.J.	159	GENOT, V.	223	GIONCADA, A.	95
GARCIA-LADONA, E.	259	GENOVES, A.	179	GIORDANI, H.	177, 181, 201
GARCIA-LOPEZ, S.	142, 143	GENS, A.	111	GIORDANI, P.	199
GARCIA-RUIZ, J.M.	153, 154, 160, 269, 279	GENSER, J.	85	GIORGETTA, M.A.	192
GARCOA-WEIL, L.	163, 167	GENT, P.R.	183	GIORGETTI, A.	172
GARCON, V.	126, 260	GENTE, P.	119	GIOSTRA, U.	175
GARCZYNSKA, I.N.	243	GENTHON, C.	198, 262	GIOVANARDI, F.	159
GARDA, P.	66	GENTILHOMME, V.	253	GIOVANELLI, G.	261
GARDI, A.	75	GENTILI, B.	193, 275	GIPSON, J.	133
GARDINER, B.A.	174	GEOF TEAM	79	GIRARD, M.	101
GARDNER, J.E.	95	GEOFRANCE 3D CARTOGRAPHY	79	GIRARDEAU, J.	116
GARDNER, M.	243	AND METALLOGENY TEAM	79	GIRAUD, S.	124, 200
GARDU, G.	71	GEOFRANCE 3D TEAM	79, 80	GIRBACEA, R.	63
GARDUNO, R.	203	GEOHRING, L.D.	147	GIRSHGORN, L.	88
GARIEL, J.C.	88	GEORGE, CH.	195	GIRZ, C.M.I.R.	234
GARMASH, K.P.	210	GEORGE, S.E.	193	GISH, T.	147
GARNIER, A.	207	GEORGEAUD, V.	96, 97	GISKEHAUG, A.	130
GARNIER, J.-M.	199	GEORGEAUD, V.M.	101	GISKEHAUS, A.	130
GARRIC, G.	169	GEORGIEV, I.	81	GIUDICI, M.	140, 141
GARROTE, L.	268	GEORGOPOULOS, D.	166	GIUNCHI, C.	64, 71, 72, 80
GARROTTE, L.	279	GEPTNER, T.M.	68	GIUNTINI, R.	86
GARVIN, J.B.	249	GERARD, E.	243	GLADE, T.	271
GARZOLI, S.L.	162	GERARD-MARCHANT, P.	147	GLADMAN, B.	246
GASCARD, J.C.	166	GERAUD, Y.	110	GLADSTONE, G.R.	238
GASCUEL-ODOUX, C.	143, 157, 158	GERBAULT, M.	71	GLANGEAUD, F.	86, 115
GASPAR, P.	125	GERBIG, C.	232, 262	GLASSMEIER, K.-H.	223
GASPARINI, C.	274	GERDES, R.	162, 169, 171	GLAUER, J.	205, 206
GASPARINI, G.P.	164	GERGOVA, D.	104	GLAVAS, S.	280
GASPERI, J.	123	GERHARD, M.	196, 197	GLAZMAN, R.E.	125, 257
GASPERINI, L.	117	GERMA, P.-H.	90	GLENNIE, C.L.	130
GASPERINI, P.	64, 274	GERMAIN, B.	243	GLIEM, F.	214, 224
GASQUET, D.	63	GERMANN, P.	157	GLIKO, A.O.	108
GASSE, V.	219	GERNANDT, H.	228	GLINSKY, B.M.	87, 272, 273
GASSMANN, A.	171	GERRITSEN, H.	200-202	GLOBUS, A.M.	253
GASSNER, M.	175	GERSHENZON, M.YU.	196	GLOECKLER, G.	213, 214, 224, 245
GATZEMEIER, A.	114	GERSHENZON, YU.M.	196	GLOERSEN, P.	170
GAUDEMER, Y.	75	GERSTENECKER, C.	122	GLOT, J.-P.	89, 90
GAUDET, J.P.	158	GERSTL, M.	127	GLOVER, P.	110
GAUDIA, F.	246	GERSTL, S.	184	GLOVER, P.W.J.	109, 110, 112
GAUDICHET, A.	118, 280	GERVASIO, L.	167, 172	GLOWACKA, E.	126
GAUDIN, J.C.	123	GERZ, T.	173, 174, 234	GOBIN, A.	154, 155
GAUDU, J.C.	148	GESSNER, K.	80	GODA, M.P.	268
GAULLIER, V.	120	GETINO, J.	133	GODANO, C.	93
GAUS, I.	140	GEUZENS, P.	146	GODIN, S.	226, 227, 232, 262
GAUTAM, P.	96, 97	GEYER, A.	197, 198	GODOY, J.	163
GAUTHIER, P.	95, 232, 261	GGGELER, H.W.	231	GODT, J.W.	279
GAUTHIER, P.-J.	95	GHEBREAB, W.	77	GOEBBELS, J.	108
GAUTIER, D.	236, 239, 246, 247	GHEM, V.E.	220	GOEDE, A.	209, 228
GAUTIER, P.	82	GHEUSI, F.	258	GOEDE, A.H.P.	225
GAUTIER, Y.	140	GHIL, M.	132, 202, 256	GOES, S.	69, 71
GAUTIER, D.	243	GHITAU, D.	136	GOETZ, W.	250, 251
GAUTROIS, M.	204, 205	GIADA TEAM	241	GOETZE, H.J.	66
GAUTSCHI, A.	111	GIALANELLA, C.	122	GOGOU, A.	199, 204, 205
GAVART, M.	125	GIAMPANI, C.	270	GOGUITCHAICHVILI, A.	96-98
GAVIGLIO, P.	109	GIAMPICCOLO, E.	82, 89	GOGUTCHAICHVILI, A.	97
GAVINELLI, M.	149	GIANNOPoulos, P.	176	GOHL, K.	115
GAVRILOV, A.G.	152	GIARDINI, D.	64	GOIRAN, J.P.	122
GAYANOV, V.G.	118	GIARDINO, C.	279	GOKALP, H.	70
GAYET, J.F.	184	GIARRUSSO, C.C.	267	GOKOV, A.M.	209, 210
GAZEAU, M.C.	244	GIBBS, M.	161	GOKTAP	74
GEBALLE, T.	243, 247	GIBERGANS BAGUENA, J.	269		
		GIBERT, D.	90, 106, 133		

GOLAZ, C.	157	GRABER, W.K.	175	GROMOV, V.V.	244
GOLBRAIKH, E.	178, 179, 265	GRABOWSKI, J.	83, 85	GRÖNLUND, L.	169
GOLDBAUM, B.	178	GRAD, M.	83, 84	GROPIUS, M.	115
GOLDBERG, V.	144, 173	GRAF, H.-F.	164, 165, 183, 208	GROS, J.B.	246
GOLDENFUM, J.A.	139, 142	GRAFE, A.	211	GROS, V.	187, 205, 206
GOLDIN, S.	86	GRAFF, A.	178	GROSE, W.L.	233
GÖLDNER, R.	177	GRAFODATSKY, O.	244	GROSFELD, K.	171
GOLDSTEIN, S.L.	198	GRANAHAN, J.C.	237	GROSS, CHR.	205, 206
GOLENKO, N.N.	168	GRANBERG, I.G.	179	GROSS, R.S.	128
GOLIN'KO, V.	268	GRANDE, M.	216, 217	GROSS, U.	194, 195
GOLITSYN, G.S.	68, 252	GRANDJEAN, G.	79	GROSSI, G.	144
GÖLKE, M.	73, 74	GRANET, M.	79, 80, 87, 88	GROSSKLAUS, M.	181
GOLLO, P.	145, 270	GRANIER, C.	225, 261	GROSSMAN, R.L.	174, 175
GOLOMBEK, M.P.	249-251	GRANJA, H.	122	GROSSMANN, K.U.	184, 208
GOLOUB, P.	184	GRANLUND, K.	141	GROTEFENDT, K.	169
GOLTZ, C.	252	GRANT, J.	235	GROTEN, E.	129
GOLUBEV, V.A.	118	GRANT, W.B.	208	GROTH, C.P.T.	211, 213, 240
GOMBOSI, T.I.	211, 213, 240	GRAPPIN, R.	215	GROTHUES, H.-G.	246
GOMES, M.A.F.	252	GRARD, R.	221, 239, 240	GROUSSET, F.	198
GOMES, P.	187	GRASSET, O.	69	GROUSSET, F.E.	198
GOMEZ LAHOZ, M.	200	GRATCHEV, V.G.	135	GRÖVALL, H.	170
GOMEZ, J.B.	252	GRATHWOHL, P.	139, 149, 150	GRUAU, G.	151, 157
GOMEZ, J.M.G.	254	GRATIER, J.-P.	141	GRUBER, TH.	130
GOMEZ, M.	179	GRATTONI, P.	279	GRUEN, E.	244, 247
GOMEZ-ARTOLA, C.	157	GRAVEL, S.	232, 261	GRUENTHAL, G.	64
GOMEZ-ENRI, J.	125, 130	GRAVENHORST, G.	146, 176	GRUENWALDT, H.	214
GOMEZ-HERNANDEZ, J.J.	140	GRAY, L.J.	232, 261	GRÜN, E.	240, 242, 244, 246, 247
GOMEZ-PLAZA, A.	152, 159	GRAZZINI, F.	268	GRÜN WALDT, H.	213, 224
GOMIS, D.	166, 171	GRBEC, B.	169	GRUSHINSKY, A.N.	70, 72
GONCALVES HENRIQUES, A.	144	GREBOWSKY, J.M.	67, 217	GRYANIK, V.	266
GONCHAROV, A.V.	147	GRECKSCH, G.	110	GRYANIK, V.M.	174
GONCHAROV, M.A.	68	GRECO, F.	278	GRYDELAND, T.	211
GONCHAROV, V.P.	266	GREELEY, R.	237, 238, 251	GRYGORIAN, O.	273
GONI, G.	162	GREEN, A.	103	GRYNING, S.-E.	173
GONZALEZ CASADO, J.M.	77	GREEN, A.W.	107, 215	GRYNING, S.E.	174
GONZALEZ DIAZ, E.F.	279	GREEN, S.	234	GRZHIBOVSKIS, R.	144
GONZALEZ, C.	147, 154, 189	GREENAWAY, R.G.	123, 134	GUALDI, S.	191
GONZALEZ, E.	157	GREENBERG, J.	186	GUASCH, A.	125, 126
GONZALEZ, I.	108	GREENE, G.C.	234	GUDKOVA, T.V.	236, 251
GONZALEZ, J.	159	GREENSLADE, M.D.	258, 263	GUDMUNDSSON, A.	91, 92, 94, 95, 139
GONZALEZ, M.I.	173	GREENWALD, R.A.	217	GUDMUNDSSON, M.T.	106
GONZALEZ, S.A.	211	GREFF-LEFFTZ, M.	133	GUENDEL, F.	82
GONZALEZ-GARCIA, R.	139	GREGersen, S.	76, 77, 84	GUENNI, L.	145
GONZALEZ-SOSA, E.	158	GREGOIRE, M.	260	GUENNOC, P.	79
GONZALEZ-SOUSA, E.	158	GREGOIRE, V.	111	GUENTHER, A.	186
GONZATO, G.	94	GREGORIS, Y.	146	GUERIN, C.	192
GOODEN, J.H.M.	234	GREGORY, J.M.	193	GUERIN, G.	76
GOODRICK, S.L.	182	GREGORY, J.M.	193	GUERIN, V.A.E.	142
GOOSSE, H.	169, 170, 183	GREINER, E.	125	GUERINOT, G.	186
GORBUNOV, L.	216	GREINER-MAI, H.	104, 105, 133	GUERRICCHIO, A.	270, 271, 276
GORBUNOV, M.	129	GREKHov, O.E.	86, 210	GUERZONI, S.	173
GORDEEV, V.YU.	261	GRELLE, A.	176	GUESSEN, A.V.	202
GORDO, C.	163	GRENERCZY, GY.	137, 138	GUFFOND, D.	234
GORDON, A.	171	GRESILLON, D.	174, 217	GUIBOURG, S.	268, 278
GORDON, M.	250	GRESILLON, J.-M.	159	GUIDOBONI, E.	274
GORDON, R.G.	72	GRESTA, S.	82, 278	GUIEU, C.	199, 260
GORINI, A.	89	GRESWELL, R.	141	GUIGUET, R.	79, 89, 90, 108
GORINI, C.	120	GREVEMEYER, I.	118	GUIJARRO, A.	179
GOROZHANINA, Y.	83	GREWE, V.	226, 233	GUILBAUD, S.	268
GORSKY, G.	167	GREY, S.	165	GUILBERT, J.	88
GORYACHKIN, YU.N.	169	GRIBI, P.	111	GUILLEMET, B.	184, 254
GORYL, P.	125, 126	GRIBIN, S.	154	GUILLEN, A.	79
GOSLIN, J.	115, 117	GRICHUK, L.V.	66	GUILLEN, J.	167, 168
GOSSLER, J.	84	GRIDIN, V.I.	66	GUILLOCHEAU, F.	79
GOTTIKH, R.P.	176	GRIEGER, B.	189, 190	GUILLOT, G.	157
GOTTSCHALK, L.	140, 144, 146, 154, 269	GRIEGER, N.	208	GUILLOT, S.	80
GÖTZE, H.-J.	66, 67, 83	GRIEVE, R.A.F.	246	GUILLOT, T.	236, 239, 248
GOUGET, H.	231, 261	GRIFFAULT, L.	111, 112	GUILLOU, C.	107
GOUGH, M.P.	212, 222	GRIFFIN, M.	248	GUILLOU, H.	98
GOULA, X.	276	GRIFFIN, M.J.	246-248	GUIMERA, J.	141, 142, 150
GOULDEN, M.	177	GRIFFIOEN, J.	150	GUIO, P.	209, 211
GOUNELLE, M.	243	GRIFFITH, C.	243	GUIOMAR, M.	120
GOURDEAU, J.	199	GRIFFITHS, M.	180	GUIOT, J.	189, 190
GOURDEAU, L.	201	GRIFFITHS, P.A.	113	GUIRLET, M.	226
GOURIOU, Y.	161	GRIGO, D.	74	GUIZIEN, K.	168
GOURRION, J.	182	GRIGORIEV, V.N.	80	GULAKYAN, S.Z.	273
GOUT, C.	76	GRIMA, N.	182, 260	GULDBERG, A.	181, 183
GOUZE, P.	139, 141, 142	GRIMACO, L.	122	GULEV, S.	164, 165, 181, 182
GOUZE, PH.	141	GRIMALDI, C.	157	GULKIS, S.	247
GOUZELIN, P.	129	GRIMMOND, S.	176	GULLA, G.	270, 271
GOVERS, R.	64, 69-71	GRIMSHAW, R.	263	GULYAEVA, T.L.	220
GOVINDARAJU, R.	202	GRIMSHAW, R.H.J.	264	GUMIEL, P.	139
GOVINDARAJU, R.S.	150, 152	GRISOLOA, D.	167	GUNN, C.	76
GOZZINI, B.	144, 145	GRITCHIN, A.I.	210	GUNN, J.	170
GPS-TFZ TEAM	81	GROEBNER, N.	111	GUNN, J.T.	170
GRABER, W.	231	GROEN, J.	142	GUNNARSSON, M.	236

GUNNLAUGSSON, H.P.	250, 251	HAN, B.	243	HASTIE, D.R.	194, 196, 197
GUNSON, J.	260	HAN, G.	125	HASZPRA, L.	197, 198
GÜNTHER, G.	207, 208, 227	HANAK, J.	109	HATA, M.	273
GUO, B.	99, 100	HANAOKA, Y.	225	HATUKAI, P.	153, 154
GUO, J.	203	HANASZ, J.	221	HATZFELD, D.	277
GUO-YUE, N.	269	HANBABA, R.	219, 220	HATZIANASTASSIOU, N.	186
GUPTA, H.K.	110	HANDLER, R.	74	HATZIDIMITRIOU, P.	277
GURAUD, Y.	109	HANKE, M.	196, 197	HAUBER, E.	249, 251
GURGEL, K.-W.	200, 201	HANNA, E.	170	HAUBOLD, H.	85, 102
GURGENIDZE, M.	173	HANNACHI, A.	265	HAUCHECORNE, A.	193, 207, 226, 232, 258, 262
GURIOLI, L.	104, 278	HANNAY, D.	118	HAUDEBOURG, V.	244
GURMAN, J.B.	213	HANNAY, D.E.	118	HAUF, T.	233-235
GURNETT, D.	241, 242	HANNER, M.	249	HAUFF, K.	187
GUSCHIN, G.	229	HANNER, M.S.	247	HAUGAN, P.	163
GUSCHIN, G.P.	229	HANNULA, H.	150	HAUGAN, S.V.H.	224, 225
GUSEV, A.	77, 78, 245	HANSEN, B.	165	HAUGLUSTAINE, D.	225, 261
GUSTAFSSON, G.	216	HANSEN, B.U.	174, 176, 177	HAUGLUSTAINE, D.A.	225, 230
GUSTAFSSON, N.	202, 203	HANSEN, C.	165	HAUS, R.	244
GUSTARD, A.	160	HANSEN, D.	70, 129	HAUSCHILD, A.	174
GUTDEUTSCH, R.	274	HANSEN, G.B.	237	HAUSER, F.	87
GUTERCH, A.	83, 84	HANSEN, J.	204	HAUSER, J.	166
GUTIERREZ, C.	255	HANSEN, K.C.	240	HAUSLEITNER, W.	135
GUTIERREZ-OJEDA, C.	147	HANSEN, L.K.	151	HAUSMANN, M.	197, 198, 205, 206
GUTIERREZCEBALLOS, C.	255	HANSEN, M.	161	HAUTOT, S.	112
GUTSCHER, M.-A.	117	HANSEN, U.	77, 78, 186, 263	HAVERDINGS, H.	234
GUYOT, F.	69, 245	HANSTEEN, V.H.	224	HAVERKAMP, R.	147, 157, 158
GUZZETTI, F.	278, 279	HANUISE, C.	174, 217	HAWAT, T.	227
GVELESIANI, A.	264	HANYK, L.	72	HAWKESWORTH, C.J.	95
GVELESIANI, T.	264	HAPGOOD, M.	211	HAYASHI, K.	110
GWGOU, A.	204, 205	HAPGOOD, M.A.	207	HAYES, K.F.	141, 151
HAACK, S.K.	150	HARANGOZO, S.A.	171	HAYES, M.	144
HAACK, H.	85	HARDER, M.	169, 170	HAYNES, P.H.	230-232, 258, 260-262
HAACK, V.	77, 78, 107, 113, 114	HARDER, S.	83	HBENER, S.	231
HAARMSMA, R.J.	165, 190	HARDING, A.J.	117	HE, J.	71, 264
HAAS, R.	128, 132	HARDING, J.	201	HE, J.-M.	264
HAASE, G.	185	HARDING, R.J.	155, 188	HEAD III, J.	237, 245
HAASE, O.	92	HARE, T.	250	HEAD III, J.W.	117, 237, 238, 245
HAATAJA, J.	192	HARGRAVES, R.B.	250, 251	HEAD, J.	237
HABERLAND, CH.	82	HARGREAVES, J.C.	200, 201	HEAD, J.W.	237, 249
HABERLE, R.	249	HARI, P.	176, 192	HEAPS, A.	228
HABERLE, R.M.	249	HARISSON, D.	187	HEARD, D.E.	196, 197
HABERSACK, H.	143, 156	HARLANDER, U.	171, 258	HEBERT, H.	70, 117
HABETS, F.	157	HARLAUT, D.	139	HEBESTREIT, K.	195
HACKENBERG, P.	215	HARLEY, P.	186	HECHT, J.H.	210
HACKER, P.	181	HARLEY, S.L.	94	HECK, A.	240
HACUHECORNE, A.	227	HARLOFF, J.	238	HECK, P.	155
HADAMCIK, E.	241, 243, 244	HARMAND, B.	111, 149	HEDLIN, M.A.H.	130
HADERLEIN, S.	141	HARMS, I.H.	170	HEFI, S.	224
HADERLEIN, S.B.	149	HARNISCH, G.	122	HEFLIN, M.B.	71, 134
HADERLIEN, S.B.	151	HARNISCH, M.	122	HEFTI, S.	224
HAEGEL, F.-H.	150	HAROGH, P.	209	HEFTY, J.	136, 137
HAFNER, T.	233, 235	HARRI, A.-M.	238, 239	HEGAI, V.V.	209, 210, 273
HAGEMANN, S.	146	HARRIES, J.E.	192	HEGYMEGI, L.	107, 215
HAGERMANN, A.	241	HARRINGTON, J.F.	111	HEHL, K.	130, 200, 201
HAGFORS, T.	210, 211, 216, 242	HARRIS, A.	246	HEIDBACH, O.	82
HAHN, G.	246, 247	HARRIS, G.W.	194	HEIDEN, A.C.	187
HAHN, K.U.	234	HARRIS, S.D.	113	HEIDENREICH, W.	177
HÄHNER, P.	252	HARRISON, A.	96, 97	HEIKINHEIMO, M.	280
HAIDEN, T.	145	HARRISON, C.G.A.	98, 128	HEIKKINEN, P.J.	73, 87
HAINEES, K.	124	HARRISON, M.S.J.	188	HEIMANN, A.	102
HAINES, B.	124	HARRISON, R.	225	HEIMO, A.	228
HAINES, K.	165, 172, 198	HARRISON, R.A.	207, 224, 225	HEIN, G.	81, 127
HAINZL, S.	273	HARROP, N.D.	122	HEIN, R.	226
HAIRSTON, M.R.	217	HART, J.	132	HEINBOCKEL, R.	115
Haji Abu, S.	123	HART, P.E.	117, 118	HEINEMANN, M.	222
Hajnal, Z.	87	HARTMANN, A.	178	HEINRICH, P.	267, 278
HAKKINEN, S.	165	HARTMANN, G.K.	209	HEINRICH, P.H.	267, 268
HAKOLA, H.	187	HARTMANN, R.	126	HEINRICH, R.	77
HALBACH, P.	117, 200	HARTNADYB, C.J.H.	118	HEINZ, S.	260
HALDEMANN, A.F.C.	251	HARUYAMA, J.-I.	246	HEIRTZLER, D.	214, 223
HALENKA, T.	208, 261	HARWART, S.	99	HEISE, E.	190
HALFORD-MAW, P.A.	196, 197	HARWELL, J.	150	HEJDA, P.	97, 107, 218
HALL, J.	119	HASAGER, C.B.	174	HEJKRLMK, L.	189
HALLDIN, S.	152	HASCHBERGER, P.	233	HEKANSSON, B.	168
HALLENBECK, S.	243	HASE, H.	135	HELFFRICH, G.	68
HALLOCK, J.	234	HASELTON, K.	257, 275, 276	HELLER, D.-A.	238
HALSEY, N.	234	HASHIMOTO, M.	272	HELLER, F.	97, 99
HAMAL, K.	135	HASINGER, G.	256	HELLING, C.F.	147
HAMBACH, U.	100	HASKIC, A.	107, 114	HELLMER, H.	171
HAMEL, M.	131	HASSAN, G.S.	103	HELLMER, H.H.	171
HAMELIN, B.	198, 199	HASSAN, H.	105, 106	HELLMUTH, K.-H.	108
HAMILTON, D.	240	HASSANI, R.	77, 78, 82, 139	HELLWEG, M.	93
HAMILTON, D.C.	214	HASSANZADEH, J.	68	HELM, C.M.	99
HAMILTON, D.P.	240	HASSE, L.	181	HELMING, K.	143
HAMONOU, E.	280	HASSLER, D.M.	224, 225	HELMS, M.	156
HAMRE, T.	202	HASSOUP, A.	272		

HEMBISE, O.	226	HILLS, J.G.	268	HOPPER, J.F.	194
HEMMANN, R.	77	HILMER, M.	169, 170	HOPPER, J.R.	116
HENDEL, R.	68	HILTON, M.	95	HORACEK, J.	107
HENDERSON, J.	234	HIMMELMANN, S.	194, 195	HORANYI, M.	240
HENDRICKS, J.	233	HINDERER, J.	127	HÖRDT, A.	92
HENDRIKS, B.	78	HINSON, D.P.	240	HOREN, H.	119
HENDRY, R.	202	HINTSA, E.J.	231	HORIE, O.	187
HENNESSY, K.J.	193	HINZ, K.	81, 115	HORRITT, M.S.	270
HENNI, P.H.O.	274	HIRANO, S.	70	HORSEMAN, S.T.	111, 112
HENOCQUE, O.	96, 97	HIRATA, Y.	272, 273	HORST, T.W.	174, 175
HENRIOT, O.	109, 123	HIRN, A.	63	HORVATH, F.	63, 72-74, 90
HENRY, B.	97, 102	HIROKI, Y.	118	HOSKINS, B.	192, 232, 261
HENRYS, S.A.	118	HIRSCH, H.	241	HOSKINS, B.J.	179
HENSE, A.	132, 164, 165	HIRSCHI, J.	162	HOST, G.	268
HENSON, D.	113	HIRSEKORN, V.	103	HOU, D.	256
HENZE, M.	142	HIRT, A.M.	101	HOUGHTON, J.	113
HERAK, D.	86	HIRT, U.	159	HOUDIN, C.	238, 239
HERAK, M.	86, 88	HIRTH, G.	117	HOUDIN, F.	238, 239, 261
HERAS, A.M.	248	HISCOTT, R.	119	HOUDIN, F.; J. LUZ, D.	239
HERBERT, H.-J.	111	HISDAL, H.	268	HOUSA, V.	102
HERBERT, T.D.	65, 66	HISMATULIN, T.	78, 79	HOUWELING, S.	225
HERBERT, V.	259	HJORTH, J.	187, 196, 197	HOVENSTADT, D.	224
HERBIG, K.	168	HO, C.-R.	126	HOVESTADT, D.	214, 223, 224
HEREIL, P.	231, 268	HOAN, S.	242	HOVORKA, D.	85
HERETER, A.	148	HOANG, S.	213, 222, 242	HOWARD, R.	225
HERFORD, M.	149	HOBBS, S.E.	175	HOWARD, R.A.	223, 225
HERKENHOFF, K.	251	HOBRO, J.W.D.	117	HOWELL, E.S.	95, 278
HERLIN, I.	123	HOCHEGGER, G.	219	HOWELLS, V.ST.C.	207
HERMAN, J.R.	228	HOCHSTEIN, M.P.	70	HOWINGTON-KRAUS, A.	250
HERMAN, R.L.	231	HOCK, L.	168	HOYNG, P.	130
HERMAND, J.-P.	172, 173	HOCK, S.	84	HRABAK, P.	101
HERMANN, S.	275	HOCKE, K.	129	HROUDA, F.	96, 97, 109
HERMANN, S.	275	HOEG, P.	129	HRUSECKY, I.	67
HERMANN, R.M.	275	HOEHENER, P.	150	HSU, C.J.	266
HERMMANN, H.	196	HOEING, K.	83	HSU, K.J.	94
HERNANDEZ, B.	74, 123	HOETZL, H.	149	HU, J.-C.	82, 274
HERNANDEZ, E.	178, 229	HOER, P.	197, 198	HU, S.	99, 100
HERNANDEZ, F.	124, 125, 130	HOFFMAN, K.A.	98	HUANG, C.	81, 143
HERNANDEZ, N.	142, 143	HOFFMANN, H.	245, 246, 251	HUANG, C.-Y.	81
HERNANDEZ-GARCIA, E.	259	HOFFMANN, M.	246	HUANG, C.M.	209
HERNANDEZ-GUERRA, A.	163, 167	HOFFMANN, P.	207, 210, 231	HUANG, X.	202, 203, 219
HERNANDEZ-PAJARES, M.	218, 219	HOFFMANN, V.	96, 98, 99, 101	HUANG, X.-Y.	202, 203
HERRAIZ, M.	77	HOFFMANN-ROTHE, A.	114	HUAR, A.	220
HERRERA, M.D.	167, 168	HOFMANN, A.	100	HUBATKA, F.	85
HERRERA, R.G.	240	HOFMANN, D.J.	233	HUBBARD, W.B.	236, 248
HERRERO, A.	89, 156	HOFSTETTER, R.	65	HUBER, M.C.E.	224
HERRERO, F.A.	67, 211	HOFSTETTER, TH.B.	149, 151	HUBERT, A.	275
HERRING, T.A.	133	HOFTON, M.A.	130	HUBERT, D.	213
HERRMANN, H.	186, 193	HOFZUMAHAUS, A.	196-198, 204-206	HUBRECHTS, L.	147
HERRMANN, P.	162	HOGG, N.G.	162	HÜBSCHER, C.	65, 120
HERSBACH, H.	203	HOJKA, A.M.	74	HUCHON, P.	115, 117
HERTOGEN, J.	117	HOJSTRUP, J.	280	HUCK, T.	161
HERTZOG, A.	207, 258	HOLBACK, B.	217	HUDNUT, K.	134
HERVAS, J.	278	HOLBROOK, W.S.	116	HUDSON, J.A.	117, 144
HERWANGER, J.	103	HOLDSWORTH, R.E.	108	HUDSON, M.	223
HESLOP, D.	99	HOLFELDER, T.	148, 156	HUENGES, E.	107, 109, 110
HESS, P.	231	HOLLAND, F.	196-198, 205, 206	HUESO, R.	239
HESSE, R.	118	HOLLER, G.	129	HUESS, V.	125
HESSLING, M.	154	HOLLER, K.	129	HUGGENBERGER, P.	139, 140
HESSNER, K.	168, 200, 201	HOLLIGER, K.	88	HUGHES, T.J.	71
HETTEL, S.	85	HOLLINGER, D.	176	HUGUENIN, D.	227
HETZEL, R.	81	HOLLINGWORTH, J.	249	HUISMANS, R.	77, 85
HETZHEIM, H.	209	HOLLMANN, R.	185	HULIN, J.P.	158, 252
HEUSSNER, S.	199	HOLLOWAY, P.	263	HUMBERT, C.	96, 97
HEWSON, T.	180	HOLLOWAY, P.E.	167	HUMLER, E.	115
HEYWOOD, D.I.	135	HOLM, D.D.	266	HUMMELSHOEJ, P.	176, 186
HIBBERT, A.	224	HOLM, J.	142	HUNGR, O.	271, 279
HIBBITTS, C.A.	237	HOLOTA, P.	105, 131	HUNKELER, D.	150
HICKS, E.C.	77	HOLSCHNEIDER, M.	90, 133	HUNSTAD, I.	90
HIDALGO, M.C.	142, 143	HOLT, M.W.	200	HUNT, D.L.	262
HIDAYAT, T.	239	HOLT, W.	71	HUNT, H.D.	161
HIDE, R.	252	HOLVOET, F.-X.	112	HUNTINGFORD, C.	176
HIEKE, W.	115	HOLZÄPFEL, F.	234	HUON, S.	158, 198
HIESINGER, H.	245	HOMAR, V.	268	HUOT, E.	123
HIETALA, R.	170	HONARY, F.	211, 218	HUOT, J.-P.	239, 260
HIGUCHI, T.	108, 113	HONNOREZ, J.	96, 97	HUPPERT, A.	256
HIGY, C.	152	HONORE, C.	261	HURAI, V.	94
HIKIMA, R.	110	HOOD, A.W.	213	HURLBURT, H.E.	202
HILCHENBACH, M.	213, 214, 223, 224, 242	HOOD, M.	170	HURST, K.	134
HILDE, T.W.C.	115	HOOGEN, R.	226, 227	HURTALOVA, T.	175
HILDEBRAND, P.H.	179, 180	HOOGENDOORN, J.H.	149	HUS, J.	99
HILDEBRANDT, H.	163	HOOKER, P.J.	111	HUSTI, G.J.	130
HILDEBRANDT, J.A.	117	HOOPER, R.J.	76	HUTCHINSON, D.	152
HILL, M.C.	141	HOPEWELL, H.	122	HUTH, R.	193
HILL, M.J.	96, 97	HÖPFNER, J.	131, 132	HUTTON, D.	76
		HOPPE, U.-P.	209	HUUSE, M.	91

HUWE, B.	148	IUDICONE, D.	172, 173	JANSA, A.	179
HUYBRECHTS, P.	72	IUTSENKO, V.N.	220	JANSEN, E.	161
HUYNH, H.T.	234	IVAKHNENKO, A.P.	96, 97	JANSEN, W.	256
HVIID, S.F.	250, 251	IVANOV, A.B.	238	JANSKY, J.	86
HYNDMAN, R.	118	IVANOV, B.A.	236	JANSMA, P.	95
HYNDMAN, R.D.	118	IVANOV, K.G.	213	JANSMA, P.	81, 278
HYVONEN, P.	246	IVANOV, L.M.	255, 257	JANSEN, F.	168, 200, 201
HYVONEN, T.	87	IVANOV, M.K.	119	JANTSCHIK, R.	198
IACCARINO, G.	275	IVANOV, S.S.	257	JARCHOW, C.	209
IACOBELLIS, V.	145	IVANOV, V.	170	JARDIN, M.	234
IACONDINI, A.	150	IVANOV, V.A.	169	JAROSLAWSKI, J.	229
IACONO, R.	265	IVANOV, V.V.	89, 189	JAROSZ, E.	167
IATROU, T.	229	IVANOV, YU.A.	162	JARVIS, M.J.	207
IBADINOV, KH.I.	243, 244	IVANOVA, E.V.	189	JARVIS, P.G.	176
IBANEZ, J.	88, 92, 278	IVANOVA, K.	254	JAUBERT, G.	180
IBANEZ, M.A.	159	IVANOVA, T.P.	274	JAULT, D.	133
IBRAGIMOV, S.Z.	96, 97	IVARSSON, K.-I.	202	JAUMANN, R.	135, 136, 241, 245, 249, 251
IBROM, A.	146	IVCHENKO, N.V.	212	JAUPART, C.	82
IDA, S.	248	IVCHENKO, V.	221	JAVAKHISHVILI, Z.	257
IDE, K.	256, 258, 259	IVCHENKO, V.O.	166	JAYNES, D.	147
IGEL, H.	88, 91	IVERSEN, T.	203	JEANDEL, C.	163, 198, 202
IGLER, B.	140	IVEY, G.N.	167, 257	JEANDEL, C.C.	163
IGOUMNOV, V.	273	IVINS, E.R.	71, 74, 128	JECHUMTALOVA, Z.	91
IHDE, J.	136	IWATA, T.	245	JEDICKE, R.	246
IHLME, P.	268	IYENGAR, G.	203	JEFFERSON, D.C.	124
IHMLE, P.F.	88, 89	IZMODENOV, V.	214	JEGEDE, O.O.	175
IKEDA, M.	169	IZMODENOV, V.V.	214	JEKABSONS, N.	139
ILAEIN, S.D.	196	IZQUIERDO, A.	168	JELENSKA, M.	99, 101, 102
ILDEFONSE, B.	117	JAANI, A.	218	JELINOWSKA, A.	100, 107
ILLES-ALMAR, E.	67, 218	JABOCS, F.	93	JELLALI, S.	158
ILLINGWORTH, A.J.	184	JACKSON, C.P.	139, 140	JELMERT, T.A.	108
ILVESNIEMI, H.	176	JACKSON, D.R.	232	JENATTON, L.	79
ILYUSHIN, Y.A.	226, 227	JACOB, A.	202	JENG, Y.	87, 88, 104
IMAE, M.	135, 136	JACOB, A.W.B.	69, 83, 87, 115	JENKIN, M.E.	196, 197
IMBER, J.	108	JACOB, B.	77, 78	JENNISKENS, P.	244
IMBERGER, J.	148	JACOB, D.	181, 262	JENSEN, H.R.	201
IMPERATO, I.	233, 235	JACOB, V.	229	JENSEN, J.M.	66, 214
IMPEY, G.	194	JACOBEBIT, J.	190	JENSEN, K.H.	142
INALL, M.	168	JACOBI, CH.	207, 209, 210	JENSEN, N.O.	174, 176, 186
INBAR, M.	160	JACOBS, C.	267	JENSEN, N.R.	187
INCLAN, G.	233	JACOBS, F.	105, 108	JENSEN, S.L.	84
INFANTE, C.	173, 175	JACOBS, G.A.	202	JENTINK, H.W.	233
ING RESEARCH GROUP	89	JACOBS, P.	167	JENTZSCH, G.	73, 77, 92, 94, 106, 122
INGEROV, A.I.	83, 108, 112-114	JACOBS, P.J.	196, 197	JERRETT, D.	134
INGERSOLL, A.P.	260	JACOBSDOTTIR, S.	78	JESECK, P.	227
INGHAM, T.	194, 195, 226	JACOBSEN, B.	217	JEWSON, S.P.	190
INHESTER, B.	225	JACOBSEN, B.H.	66, 103, 214	JEZEK, J.	96, 97
INNES, D.	223	JACOBSEN, B.J.	66	JL, Z.Z.	263
INNES, D.E.	225	JACOBSEN, I.	178	JIA, Y.	162
INSERGUEIX, D.	238	JACOBSEN, J.B.	169	JIANG, J.	77
INSERGUEIX-FILIPPI, D.	68	JACOBY, S.	173, 174	JIBSON, R.W.	275, 276
IOGANSON, L.I.	73, 77	JACOBY, W.R.	63, 64, 104, 105	JIMENEZ, B.	167
IORGULESCU, I.	152	JACOBY-KOALY, S.	231	JIMENEZ, J.J.	162, 166, 191
IP, W.-H.	222, 224, 240, 241, 245, 247	JACQUES, D.	147	JIMENEZ, J.R.	142
IPATOV, A.V.	135	JACQUEY, C.	220	JIMENEZ, O.	110
IPAVICH, F.M.	214, 224	JACQUIN, C.G.	108	JIN YI-SHENG	122
IRITANO, G.	271	JACZEWSKI, A.	256	JIN, F.F.	191
IRITZ, Z.	175	JADIN, E.A.	228	JINJIKHASHVILI, G.	264
IRIVING, D.	271	JAEDICKE, C.	146	JIRICEK, F.	218, 221
IRMLER, S.	141	JAELKE, U.	141, 253	JOCHMANN, H.	127, 133
IRWIN, P.G.J.	239, 246-248	JAESCHKE, W.	204, 205	JOCHNIEWICZ, J.	220
ISAEV, S.V.	216	JAFFRI, F.	136, 137	JOCHUM, A.	280
ISAEVA, A.B.	261	JAGOUTZ, E.	198, 245	JOCKERS, K.	241, 242
ISAKA, H.	184, 185, 254	JAGUSCH, F.	185	JOHANNESSEN, B.O.	167
ISAKSEN, I.	225, 233	JAHR, T.	68	JOHANNESSEN, T.	161, 170
ISAKSEN, L.	203	JAHR, TH.	94, 106, 122	JOHANSSON, B.	155
ISBELL, C.	250	JAHR, H.	76	JOHANSSON, J.M.	71, 133, 134
ISEMER, H.-J.	181	JAKOBS, H.J.	178	JOHANSSON, P.-E.	174
ISENBECK-SCHRÖTER, M.	151	JAKOBSEN, M.	117	JOHN, B.	117
ISHIDA, T.	257	JAKOBSEN, R.	151	JOHNS, T.C.	188, 193
ISHIHARA, Y.	245	JAKOWSKI, N.	129, 218	JOHNS, W.	161
ISHII, H.	272, 273	JAKUBIAK, B.	203	JOHNSON, B.	72
ISHII, M.	69	JAMES, I.D.	200	JOHNSON, C.	81
ISIKARA, A.M.	64	JAMES, I.N.	169, 208	JOHNSON, C.E.	197, 198, 230, 233
ISNARD, O.	262	JAMES, P.M.	226	JOHNSON, E.	170
ISOPHOT COMET TEAM	247	JAMES, T.S.	71, 128	JOHNSON, E.R.	266
ISRAELEVICH, P.L.	217	JAMET, D.	199	JOHNSON, J.	250
ISSAUTIER, K.	213	JAMET, J.L.	199	JOHNSON, J.R.	249-251
ISSAWY, E.A.M.	103	JAMIESON, D.	160	JOHNSON, R.J.	163
ISSLER, S.A.	175	JANAK, J.	136	JOHNSON, T.J.	128, 132
ISTEKOV, K.	272	JANAK, M.	84, 85, 94	JOHNSON, T.V.	237
ISTERHUS, S.	171	JANICOT, S.	188, 189	JOHNSTON, J.C.	209
ITALIANO, F.	199	JANIK, T.	83, 84	JOHNSTON, P.	122, 227
ITO, H.	108, 113	JANLE, P.	115, 236-238	JOKAT, W.	115-117
ITO, K.	245	JANOD, F.	91	JOLIVET, D.	184
ITZIN, M.	86				



JOLIVET, L.	81	KALININ, A.P.	214	KECKHUT, P.	193, 226
JOLLY, D.	190	KALINOWSKA-SLEDZINSKA, B.	137	KEEFER, D.K.	275
JOLY, A.	179-181	KÄLLEN, E.	203, 255	KEEN, A.B.	161
JONES, A.G.	92	KALLENBACH, R.	224	KEILIS-BOROK, V.	77
JONES, A.P.	278	KALLOS, G.	230	KELDER, H.	225, 230, 232, 233
JONES, C.	88, 192	KALNAY, E.	203, 204	KELDER, H.M.	232
JONES, C.G.	190	KALOGERAS, I.S.	88	KELEMEN, P.B.	116
JONES, E.	200	KALVOVA, J.	193	KELLER, G.R.	77, 78, 83, 84
JONES, F.W.	92, 113	KAMBANIS, K.G.	194-196	KELLER, H.U.	247, 249-251
JONES, G.	113	KAMEI, H.	103	KELLER, K.	127, 257
JONES, G.O.L.	207	KAMINSKIS, J.	134	KELLER, W.	131
JONES, J.A.A.	143, 144	KAMINSKY, V.D.	105, 106	KELLETT, B.J.	216, 223
JONES, R.	113	KAMP, L.	237	KELLEY, J.T.	71
JONES, R.L.	196	KÄMPER, S.	172, 173	KELLOGG, L.H.	262
JONES, S.	180	KÄMPF, J.	167	KELLOGG, P.J.	215, 242
JONES, T.B.	217	KÄMPF, M.	148	KELLY, K.A.	125, 126
JONGEN, S.	184	KANAKIDOU, M.	187, 204-206, 225	KELTS, K.	159
JÖNS, H.-P.	237, 238	KANAMORI, H.	87	KENNAN, S.	166
JÖNSSON, L.	167	KANEDA, Y.	70, 71, 257	KENNEDY, K.	139, 141, 142, 151
JORAND, F.	151	KANG, Z.	128	KENNETT, B.L.N.	87
JORDAN, C.	224	KANGAS, J.	216	KENSELAAR, F.	135
JORDAN, S.	224	KANGAS, M.	280	KENT, G.	116
JORDANA, S.	141	KANOSHINA, I.	260	KENT, R.	95
JORDANOVA, D.	99	KANWAR, R.	147	KENTARCHOS, A.	232
JORDANOVA, N.	97, 101, 104	KANZAWA, H.	227	KENYERES, A.	131, 136-138
JORGENSEN, D.	179	KAPALA, A.	164, 182	KEPPLER, E.	214
JORGENSEN, H.E.	249	KAPCIA, J.	134	KERAMITSOGLOU, I.	192
JÖRN, C.	152	KAPE, S.	73	KERDRAON, A.	242
JÖRN, K.	86, 87	KAPE, S.J.	113	KERGOAT, L.	107, 157, 193
JOSA, R.	148	KAPICKA, A.	96, 97, 99, 101	KERKEZ, S.D.	112
JOSEF, R.	150	KAPUSTINA, O.V.	273	KERKIDES, P.	155
JOSEPH, C.	157	KARAGODINA, O.	106	KERN, H.	110, 111
JOSHI, M.	249	KARAKAISIS, G.F.	271	KERN, O.	214
JOSSE, P.	181	KARAKIN, A.V.	77, 78	KERNKAMP, H.W.J.	270
JOST, D.T.	194	KARALLOTIS, A.	82, 134, 272	KERR, R.B.	210, 218
JOST, V.	182	KARAPANAGIOTI, H.K.	149	KERR, Y.H.	107
JOUANNE, F.	81, 123, 134	KARASON, H.	68	KERSEBAUM, K.C.	156
JOUNIAUX, L.	112, 158	KARATAEV, G.	106	KERSLEY, L.	210
JOURNAL, B.	198, 199	KARAVAEV, D.	192	KESSELMEIER, J.	186-188
JOUSSAUME, S.	169, 190	KARAVAEVA, E.V.	193	KESSELS, W.	110
JOUZEL, J.	189	KÄRCHER, B.	233	KESSLER, M.F.	247, 248
JOYCE, T.M.	163	KÄRCHER, F.	225	KESTENARE, E.	164
JUAN, J.M.	218, 219	KÄRCHER, M.J.	170	KETELSEN, K.	232, 262
JUANG, H.	203	KARGER, U.	181	KETTMANN, G.	217
JUCHNIEWICZ, J.	221, 222, 273	KARLIN, R.	98, 100	KEUER, D.	207, 231
JUCKES, M.N.	180, 230	KARLOUKOVSKI, V.	98, 104	KHAIN, V.E.	64
JUDENHERC, S.	79, 80, 87	KARNASSOPOULOU, A.	200	KHALIPOV, V.L.	209
JUDGE, P.G.	224	KÄRNER, O.	184	KHAN, H.	217
JUHASZ, A.	215, 241	KAROL, I.L.	186, 230, 233	KHAN, M.A.	77, 78, 114
JUHASZ, E.	73	KARPUZ, R.	74	KHANBARI, K.	117
JUHLIN, C.	78, 79, 83, 87, 88, 90	KARSTENS, U.	185	KHAPIN, YU.B.	264
JUHLIN, CH.	78	KARSTENSEN, J.	161	KHARIF, C.	264
JUHOJUNTTI, N.	87	KASAHARA, M.	89	KHARITONOV, A.L.	106, 107
JULIA, A.	168	KASATKINA, E.A.	65, 228	KHASANOV, D.I.	97
JULIAN, B.R.	78	KÄSE, R.TYLER, R.	166	KHATTATOV, B.V.	225
JUNG, T.	164, 165	KÄSE, R.H.	166	KHAZANEHDARI, J.	109, 110
JUNGE, A.	112, 114	KASHCHEYEV, B.L.	209, 210	KHODYREVA, E.J.A.	73
JUNKERMANN, W.	196, 197, 205, 206	KASTLER, J.	204, 205	KHOLODILOV, D.V.	66, 67
JURECKOVA, J.	193	KASTNER, M.	118	KHOMUTOV, S.Y.	86, 210
JUREWICZ, A.	237	KASYANENKO, L.G.	106	KHRISTOFOROV, A.V.	78
JÜRGENS, R.F.	251	KATERJI, N.	144	KHRISTOFOROVA, N.N.	69, 78
JÜRRENS, R.	169	KATTENBERG, A.	190	KHUDDLEY, A.K.	80
JUSSERAND, C.	157	KATZENMAIER, D.	154	KHUNDZHUA, G.G.	193
JUST, A.	108	KATZFEY, J.J.	176	KHURANA, K.K.	236, 240
KÄÄRIÄINEN, J.	122	KATZUNG, G.	83	KHVEDELIDZE, Z.	173, 269
KAAS, E.	165, 181, 183	KAUFELD, L.	205, 206	KIDEN, P.	122
KABAN, M.	92	KAUFMAN, M.	133	KIDO, Y.	71
KACIMOV, A.R.	140	KAUFMANN, G.	71, 72, 139	KIEHL, J.T.	193
KACZOROWSKA, R.	186	KAUKER, F.	167	KIELY, G.	145, 146
KADEL, S.	237	KAUL, N.	118	KIGUCHI, T.	113
KADSKA, A.	201	KAVOURAS, H.	187	KIKUCHI, H.	264
KADYGROV, V.E.	228	KAWANO, H.	217	KILBURN, C.R.J.	93
KAGAN, B.A.	168, 259	KAWANO, N.	245	KILGER, R.	135
KAHAR, J.	81, 123	KAWAR, R.	81	KILIAS, A.	80, 81
KAHARABATA, S.	175	KAY, J.	237	KILIAS, A.A.	80
KAHLE, H.	63, 81	KAY, M.A.	113	KILLWORTH, P.D.	202
KAHLE, H.-G.	63	KAYA, O.	74	KILSBY, C.G.	144
KAILA, K.	216	KAYEN, R.	118	KIM, D.-J.	147
KAISER, D.	77, 272	KAYMAZ, Z.	212	KIM, V.P.	209, 210
KAISER, M.L.	213, 242	KAZAHAYA, K.	149	KIM, Y.Y.	161
KAKKURI, J.	104, 127, 136	KAZANTSEV, CH.	162	KIMBELL, G.	83
KALACHNIKOV, A.A.	68, 69	KAZANTSEV, E.	253	KIMBELL, G.S.	83
KALADZE, T.D.	263, 264	KEANE, M.	235	KIMURA, H.	248
KALASS, D.	229	KEARY, R.	115	KIND, R.	69, 86, 87
KALBERER, M.	280	KEBEN, K.	146	KINDRED, D.R.	280
KALEGAEV, V.	212	KECHRA, F.	102	KING, C.	157, 273

KING, C.-Y.	273	KNUDSEN, B.M.	228	KOREPANOV, V.	67, 107, 212, 221, 273
KING, G.	275	KNUDSEN, J.M.	249-251	KORJA, A.	73, 87
KING, J.C.	171, 177, 258	KNUDSEN, P.	124-127, 130	KÖRMENDI, A.	107, 215
KING, N.	134	KNUDSEN, S.	149	KORN, M.	84
KING, R.	81	KNUDSEN, T.	125, 126	KORNBLUEH, L.	129
KINOSHITA, H.	82	KNYSH, V.V.	168	KÖRNER, U.	99, 119
KIOROGLU, S.	172	KOBAYASHI, K.	115	KORNILOV, I.A.	220
KIPFSTUHL, J.	100	KOBRUNOV, A.I.	66, 67	KOROBENNIKOV, V.P.	254
KIRBY, M.E.	90	KOCHAN, H.	243, 244	KOROTAEV, G.K.	168
KIRCHENGAST, G.	124, 129	KOCHEGURA, V.V.	189	KOROTAEV, M.V.	73
KIRCHGASSNER, K.	263	KOCHEMASOV, G.	236, 245	KORTE, M.	107
KIRCHNER, F.	228	KODAIRA, S.	82	KORTH, A.	212
KIRCHNER, G.	135	KODERA, K.	193	KORTH, W.	126, 128
KIRCHNER, I.	183	KOEHLER, C.	169	KORYAKIN E.D.	70
KIREENKOVA, S.M.	108	KOEHLER, U.	230, 245	KORYAKIN, E.D.	72
KIRIAN, D.G.	256	KOEKKOEK, H.S.	165	KOSA-KISS, A.	180
KIRIAN, G.V.	72	KOELLIKER, J.K.	152	KOSAREV, G.L.	67, 87
KIRK, R.	249-251	KOEPKEN, C.	129	KOSAREV, V.E.	99
KIRKBY, M.J.	158, 159	KOFMAN, W.	209, 217, 219, 242	KOSCH, M.	210, 218
KIRKWOOD, S.	207, 208, 231	KOHL, J.	213	KOSCH, M.J.	210, 211
KIRKWOOD, S.	207, 208	KOHL, J.L.	225	KOSCHITZKY, H.-P.	150
KIROV, V.	104	KOHL, T.	65, 110	KOSCHNY, D.	244
KIRSCH, E.	213, 214, 245	KOHLBECK, F.	107	KOSEK, W.	133
KISELEV, A.A.	230, 233	KÖHLER, I.	233	KOSKINEN, H.	220
KISELEV, A.I.	77, 78	KÖHLER, S.	205, 206	KOSKINEN, H.E.J.	217
KISIMOTO, K.	115	KÖHLER, U.	245	KOSKINNEN, H.	221
KISSEL, C.	98, 100, 189, 190	KOHLMANN, J.-P.	197, 198	KOSLOFF, D.	86
KISSLING, E.	63, 79, 82, 84	KOHLSTEDT, D.L.	111	KOSMIDIS, E.	280
KISTLER, L.M.	214, 223	KOHSIEK, A.	210, 211	KOSSACKI, K.	222
KIT, E.	267	KOHUT, I.	67	KÖSSLER, P.	65, 96, 97
KITTEROD, N.-O.	140	KOIDL, F.	135	KOSSOBOKOV, V.G.	255
KIUCHI, H.	135, 136	KOIVULA, H.	134	KOSTADINOV, I.	261
KIVELSON, M.	240, 241	KOKSHAROV, V.	112	KOSTECKY, P.	67
KIVELSON, M.G.	236, 240	KOKUBUN, S.	212, 217, 220	KOSTELECKY, J.	125, 136, 137
KIVI, R.	228, 230	KOKUBUN, S.K.	214	KOSTER, R.D.	146
KIVMAN, G.A.	125, 126, 202	KOLACZEK, B.	133	KOSTIANOV, A.G.	164, 165, 167, 172, 173
KJELDSETH-MOE, O.	224, 225	KOLATSCHEK, J.	170	KOSTINA, R.I.	92
KLADIVKO, E.	147	KÖLBL, R.	200	KOSTROV, L.S.	210
KLAESCHE, D.	115	KOLENIEWICZ, R.	134	KOSTYANOV, S.	119
KLAESCHEN, D.	117, 119	KOLEV, S.I.	228	KOSTYANOV, S.G.	65, 71, 114
KLÄSCHEN, D.	115	KOLEVA, R.T.	211, 218	KOSTYRYA, V.YA.	111
KLASSEN, A.	223	KOLLE, O.	177	KOSTYUCHENKO, I.G.	207
KLATT, C.	135	KOLLI, O.	63	KOSZINSKI, S.	148
KLAVDIEVA, M.M.	122	KÖLLING, M.	151	KOTA, J.	215
KLECKER, B.	214, 223	KÖLM, J.	194, 195	KOTKOVA, J.	94
KLECKER, R.A.	85	KOLOMBET, V.A.	121	KOTRELEVA, O.V.	133
KLEWEIN, P.	243	KOLOUTSOU-VAKAKIS, S.	229	KOTRONI, V.	179
KLEIDON, A.	146	KOLTERMANN, K.P.	162	KOTTEGODA, N.T.	255
KLEIN, M.	148	KOLTISOV, N.E.	135	KOTZEV, V.	81
KLEIN, R.	149	KOLTYSHEV, A.	169, 171	KOUBA, J.	124
KLEIN, S.A.	192	KOMAROVA, N.L.	263	KOUDELLA, C.	257, 258
KLEIN, U.	227	KOMATINA, M.	157	KOUDELLA, C.R.	263
KLEIN, W.	255	KOMATINA, S.	149, 157	KOUMTIZIS, T.	280
KLEINEIDAM, S.	139	KOMATSU, G.	238	KOUKER, W.	208
KLEIPOOL, Q.	209	KOMEN, G.J.	171, 188	KOUKIS, G.	276
KLEMASZEWSKI, J.	237, 238	KOMMINAHO, K.	83	KOULAKOV, I.	77
KLEPP, C.	179	KOMUT, T.	64	KOURIS, S.S.	219
KLESPIER, C.	66, 67, 73, 74, 76	KONDO, T.	135, 136	KOUROUMBALI, F.	129
KLEY, D.	187	KONDOLF, M.G.	160	KOURTIDIS, K.	187, 197, 198
KLIMOV, S.	220-222, 273	KONDOPOULOU, D.	104	KOUSKOUNA, A.	200
KLIMOV, S.I.	220	KONDRATYEV, K.YA.	229	KOUSKOUNA, V.	274
KLINGBEIL, R.	139	KÖNIG, R.	124, 129, 234	KOUSSIS, A.D.	151
KLINGE, K.	86, 87	KÖNIG-LANGLO, G.	194	KOUTINOV, I.G.	106, 275
KLINGER, J.	242	KONO, Y.	71	KOUTS, T.	168
KLINGER, L.	186	KONONEN, K.	260	KOUVARAKIS, G.	204, 205, 280
KLINGER, Y.	123	KONONOVA, M.	156	KOUWENHOVEN, T.J.	63
KLINGSPÖHN, M.	165, 203	KONRADOV, A.A.	120, 121	KOUZNETSOV, I.	78, 79
KLIORE, A.J.	240	KONSTANTINENKO, L.	102	KOUZNETSOVA, E.	78, 79
KLOHN, W.	155	KONSTANTINOVSKAIA, E.	92	KOVACEVIC, V.	172
KLOKOCNIK, J.	125	KONTIO, K.	141	KOVACHEVA, M.	103, 104
KLOSKO, S.	122	KONTNY, B.	136	KOVACS, P.	215
KLOTZ, J.	81	KONTUR, I.	253	KOVALCHUC, D.V.	147
KLOTZ, M.J.	126	KOOI, H.	122, 142, 146	KOVALENKO, I.G.	265
KLYMOVYCH, E.	107	KOOP, R.	130	KOVALEVSKY, V.V.	87
KLYUSHIN, J.G.	120, 121	KOPERSKI, P.	222	KOVRAZHNIK, R.	221
KMINEK, G.	246	KOPF, A.	76, 119	KOVRAZHNIK, R.	221
KNAB, M.	101	KOPNICHIEV, YU.F.	88	KOVRAZHNIK, R.A.	220-222
KNABNER, P.	140	KOPP, A.	240, 241	KOWALCZYK, E.A.	176
KNACKE, R.	248	KOPP, C.	115	KOWALSKA, B.	200, 201
KNACKE, R.F.	248	KÖPP, F.	235	KOWALSKI, A.S.	175, 177
KNIGHT, J.R.	225	KOPPAN, A.	112, 113	KOWOL-SANTEN, J.	231
KNIPE, R.J.	113	KOPPELT, U.	103	KOYAMA, J.	245
KNOCH, H.	163	KOPPMANN, R.	194, 204, 205	KOYAMA, Y.	135, 136
KNOLL, M.	163	KORCHAGIN, I.	105	KOZEL, R.	151
KNOLLENBERG, J.	241	KOREN, Z.	86	KOZELOV, B.V.	212
KNOX, R.	150	KORENAGA, J.	116		

KOZELOVA, T.V.	212	KUCERA, T.	225	LABROSSE, G.	68
KOZIN, I.	218	KUCEROVA, L.	71	LACARRERE, P.	157
KOZLENKO, V.G.	73	KUCHAREK, H.	215, 222, 224	LACASCE, J.	166
KOZLENKO, Y.	105	KUCHMENT, L.S.	147	LACASCE, J.H.	259
KOZLOVA, E.	119	KÜCK, J.	78	LACHLAN-COPE, T.	170
KOZLOWSKI, B.	143	KUDELA, K.	218, 221	LACKMANN, W.	80
KOZUR, H.W.	64	KUDELAV, K.	220	LACOMBE, C.	215
KRACKE, D.	77	KUDELYA, L.	121	LACROIX, G.	172, 173
KRAFFT, C.	216	KUDO, H.	103	LADD, A.F.	109
KRAFT, M.	251	KUDRYAVTSEVA, L.P.	151, 152	LADOUCHE, B.	158
KRAFT, S.	150	KUHN, G.	100	LAFORE, J.P.	188
KRAHMANN, G.	165	KÜHRT, E.	241	LAGADEUC, Y.	253
KRAMM, G.	185	KÜHTREIBER, N.	131	LAGERKVIST, C.-I.	236
KRAMM, U.	83	KUJAWA, L.	136, 137	LAGERLOEF, G.S.E.	127
KRANKOWSKI, A.	134	KUK, V.	86	LAGERROS, J.S.V.	236, 242, 247
KRASAKOPOULOU, E.	169	KUKHARTES, V.P.	175	LAGG, A.	241
KRASNOPOLSKY, V.A.	210, 238, 239, 242	KUKOWSKI, N.	82, 115, 117, 118	LAGOUARDE, J.P.	107
KRASNOSEL'SKIKH, V.	216, 217, 240	KULENKAMPFF, J.	108, 110	LAGOUTTE, D.	211
KRASNOSELSKIKH, V.	223	KULL, D.	269, 270	LAGOUVARDOS, K.	179
KRASNOV, V.	264	KÜLL, V.	208	LAGROIX, F.	96, 97
KRASNOVA, M.A.	86	KULLAS, T.	168	LAGUZZI, M.M.	270
KRASOVSKAIA, I.	144, 154	KÜLLMANN, K.	209	LAHMANN, W.	184
KRASTEL, S.	267	KULMALA, M.	192	LAHOZ, W.A.	228, 256
KRAUS, A.	197, 198, 204, 205, 250	KULOSHVILI, S.	65	LAHUIS, F.	248
KRAUSS, W.	169	KUMAR, P.	146	LAIME, S.	270
KRAUTSTRUNK, M.	280	KÜMPPEL, H.-J.	110	LAINE, V.	280
KRAVANJA, S.	91	KUNDZEWICZ, Z.	144	LAITAT, E.	176
KRAVCHENKO, S.	83	KUNG, K.-J.S.	147	LAI, C.	98, 100, 189
KRAWCYK, CH.	83	KUNIMORI, H.	135	LAKIN, M.J.	195
KRAWCZYK, C.M.	83, 84	KUNIN, N.Y.A.	73	LALLANA, C.	160
KREEMER, C.	71	KUNITSYN, V.E.	130, 209, 212	LALLEMAND, S.	82, 117
KREILEIN, H.	146	KUNOW, H.	223	LALLEMENT, R.	213, 214, 242
KREJCI, O.	85	KUNZ, R.	185	LALOU, C.	117
KRENTZ, O.	81	KÜNZI, K.	209, 230	LAMARCHE, G.	70
KRESL, M.	65, 66	KÜNZI, K.F.	227	LAMARCHE, J.	83
KRESTINA, N.	245	KUO, A.	266	LAMAUD, E.	177
KREUSER, T.	150	KUO, F.S.	209	LAMB, R.	140, 270
KREUZWIESER, J.	230	KUO, N.-J.	126	LAMBARE, G.	67
KREYSCHER, M.	170	KUO, W.-L.	153	LAMBECK, K.	71, 72, 122, 128
KRIEK, M.	153	KURAPOV, A.L.	125, 126, 202	LAMBERT, A.	239
KRINNER, W.	160	KURAT, G.	243, 245	LAMBERT, D.	174, 180
KRISCHKE, U.	204-206	KURDJUKOVA, T.	110	LAMBERTI, A.	259
KRISHNA, A.P.	275	KURGANSKY, M.V.	191, 256, 265	LAMBERTI, P.	153
KRISP WORKING GROUP	77	KURKA, W.	136, 137	LAMMER, H.	238, 239
KRISTIANSSEN, J.	185	KURKIN, A.A.	264	LAMMERING, B.	252, 253
KRISTJANSSON, J.E.	185	KÜRSCHNER, D.	207, 209, 210	LAMMING, X.	220
KRISTJANSSON, L.	98	KURTENBACH, R.	197, 198	LAMPEN, P.	249, 251
KRIVASHEEV, S.	273	KURTH, W.	241, 242	LAMY, P.	225
KRIVOLUTSKY, A.	207, 208, 227, 228	KURTHS, J.	256, 257, 273	LAMY, P.L.	225
KRIVOSHEYA, V.G.	167	KURTZ, R.D.	92	LANA, X.	91
KROEGER, H.	177	KURZ, C.	185, 230	LANCELOT, Y.	65, 100
KROEGER, M.	176	KURZ, W.	85	LANCI, L.	101
KRÖGER, J.	162	KUSCH, O.	108, 113	LANCI, L.	101
KROHE, A.	80	KÜSEL, K.	151	LAND, C.	231
KROL, M.	225	KUSHTANOVA, G.G.	141	LANDBERG, L.	249
KROM, T.D.	140, 156	KUSKA, J.-P.	221, 222	LANDES, M.	83, 87
KROMP-KOLB, H.	231	KUSTAS, W.P.	154	LANDGRAF, J.	186
KROMP-KOLB, L.H.	226, 227	KUTIEV, I.	219	LANDGRAF, M.	242
KRONBERG, P.	238	KUTLU, Y.A.	70	LANDRINI, M.	264
KRONER, C.	92, 122	KUWAHARA, Y.	113	LANEVE, G.	67
KRS, M.	102	KUYPER, C.	119	LANG, K.R.	225
KRSOVA, M.	102	KUZHEVSKIJ, B.M.	225, 272	LANGBEIN, J.	94
KRUCHENITSKY, G.M.	207	KUZMIERCZYK-MICHULEC, J.	182	LANGE, H.	256
KRUCZYK, M.	136-138	KUZMIN, R.	251	LANGE, J.M.	103
KRUEGER, F.	87	KUZNETSOV, G.I.	197, 198, 228	LANGE, M.	207
KRÜGER, B.C.	207, 208, 228	KUZNETSOV, L.	169	LANGEMATZ, U.	208
KRÜGER, H.	240	KUZNETSOV, V.V.	75, 86, 97, 210, 252	LANGEN, J.	226
KRÜGER, K.	208	KUZNETSOVA, V.	137, 138	LANGENBERG, H.	202
KRÜGER, U.	196	KVANSICKA, M.	86	LANGENDORFER, U.	194
KRUHL, J.H.	81, 111	KVENVOLDEN, K.	118	LANGER, J.	227
KRUJIFF, M.	67	KVENVOLDEN, K.A.	118	LANGEREIS, C.G.	97, 101
KRUIJT, B.	176	KWASNIOK, F.	256	LANGEVIN, Y.	245
KRUIVER, P.P.	97	KWONG, C.M.	200	LANGFJELL, I.	203
KRUMSIEK, K.	100	KYRÖ, E.	228, 230	LANGLAND, R.H.	179
KRUPP, N.	241	KYRÖLÄ, E.	213, 214, 226, 242	ANGLEY, R.B.	129, 135
KRYLOV, O.	76, 119	LA BARBERA, P.	143, 145, 155, 268	LANGMANN, B.	262
KRYMSKII, A.M.	223	LA ROCCA, M.	88, 92, 278	LANGSHOLT, E.	140
KRZYK, M.	156	LA TORRE, F.	279	LANGSRUD, O.	268
KRZYSCIN, J.W.	228, 230	LAAKSO, L.	176	LANKREIJER, A.	85
KRZYSZTOFIK, K.	201	LAANEARU, J.	168	LANOS, P.	104
KUANG, W.	98	LABARTHE-HERNANDEZ, G.	278	LANOS, PH.	104
KÜBLER, B.	198	LABAT, D.	157	LANOTTE, R.	72
KUBLER, L.	96, 97, 105, 106	LABEYRIE, L.	65, 100, 189	LANSIGU, C.	113
KUBO, A.	82	LABITZKE, K.	230	LANZA, L.	143, 154, 268
KUBOTA, T.	278	LABOREL, J.	122, 123	LANZA, L.G.	145, 155
		LABOREL-DE GUEN, F.	123	LANZA, V.	79

LANZEROTTI, L.J.	214	LE MOUEL, J.L.	158	LEINERT, CH.	247
LAPAQUELLERIE, Y.	199	LE QUEAU, D.	212, 223	LEITINGER, R.	219, 220
LAPENNA, V.	252, 272	LE ROULLEY, J.-C.	280	LEITNER, M.	184
LAPENTA, G.	222	LE ROULLEY, J.C.	280	LELGEMANN, H.	119
LAPEYRE, G.	232, 261	LE ROUX, D.Y.	264	LELIEVELD, J.	228, 230, 232
LAPORTE, D.	95, 111	LE STUNFF, Y.	69	LELLOUCH, E.	239, 243, 246-248
LARA, L.	240	LE THIEZ, P.	158	LELONG, M.-P.	257
LARCHEVEQUE, G.	261	LE TRAON, P.-Y.	124-126, 130	LEMAIRE, J.	217
LARCHEVEQUE, M.	253, 259	LE TRAON, P.Y.	124-126, 129, 201	LEMAIRE, J.F.	211, 218, 223
LARIO, D.	214	LE TREUT, H.	183, 188, 192	LEMAIRE, P.	213, 224, 225
LARNICOL, G.	124	LEACH, D.	102	LEMAITRE, Y.	179, 180
LAROCHE, P.	234	LEACH, H.	171, 181	LEMARCHE, J.	84
LARONE, J.B.	153, 154	LEAN, H.	180	LEMKE, D.	247
LARONNE, J.	143	LEBBE, L.	140	LEMKE, P.	169, 170
LARONNE, J.B.	143, 160	LEBEDEV, K.V.	162	LEMMON, M.	239, 249
LARSEN, B.	186	LEBEDEV, S.	70	LEMMON, M.T.	239, 249
LARSEN, B.R.	186, 187	LEBEDEV, S.A.	125, 126	LEMOINE, F.G.	104, 124, 130
LARSEN, G.	94, 95	LEBEDEVA, V.V.	216	LEMOINE, J.M.	124
LARSEN, H.C.	116	LEBEL, T.	157, 188	LEMONE, M.A.	175
LARSEN, J.C.	113	LEBELLEGARD, P.	69	LEMONNIER, C.	114
LARSEN, S.	174, 249	LEBLANC, F.	213	LEMOUEL, J.L.	133
LARSEN, S.E.	249	LEBLANC, S.	266	LEMUR, D.	219
LARSEN, T.B.	77	LEBLANC, T.	208	LENARDUZZI, L.	105
LARSON, D.	212	LEBLANC, Y.	241, 242	LENAT, J.-F.	94
LARSON, D.E.	212	LEBLANC, Y.	242	LENAZ, R.	179
LARSON, E.	69	LEBLOIS, E.	157	LENDVAY, J.M.	149
LARSON, J.	203	LEBONNOIS, S.	239	LENDVAY, J.V.	150
LARSON, K.	71	LEBORGNE, S.	89	LENG, X.	159
LARSON, S.	249	LEBOURGES, A.	166	LENGYEL, S.	104
LASANTA, T.	160	LEBRON, C.A.	150	LENHARDT, W.	274
LASSEUR, CH.	246	LEBRUN, J.-F.	70	LENK, M.	142, 156
LASTOVICKA, J.	208, 218	LEBURN, J.-F.	70	LENNARTZ, B.	157
LATHAM, A.	99	LECACHEUX, A.	243	LENORMAND, R.	140
LATHUILLERE, C.	209, 210	LECACHEUX, J.	239	LENOTRE, N.	75
LATIF, M.	188, 190	LECERF, D.	86	LENSCHOW, R.	207
LATOUCHE, C.	199	LECHNER, W.	134	LENTZ, H.	245
LATRON, J.	148, 152	LECINSKI, A.	213	LENZ, C.-J.	177
LAU, W.K.M.	192	LECKEBUSCH, G.	204, 205	LENZ, R.	186
LAUBACH, J.	175	LECKEBUSCH, J.	103	LEONARD, K.	235
LAUBENBAKH, E.	176, 271	LECOANET, H.	101	LEONARD, S.	170
LAUNIAINEN, J.	170, 171	LECOMTE, P.	151	LEONARDI, S.	278
LAURAIN, O.	134	LECOMTE, V.	156, 158	LEONE, G.	233, 235
LAURCIJS, R.	247	LEDER, S.	208, 230, 232, 262	LEONHARDT, D.	81
LAURENT, H.	188, 189	LEDESERT, B.	139	LEONOWICZ, P.	85
LAURENT, J.P.	157, 158	LEDIMET, F.	153	LEORAT, J.	215
LAURILA, T.	176, 177, 187	LEDoux, E.	151, 157	LEPPING, R.P.	212, 214, 217, 220
LAURSEN, J.	115	LEDWELL, J.R.	161	LEPVRIER, C.	74
LAUTERJUNG, J.	78, 79	LEE, C.C.	210	LEQUEAU, D.	212, 223
LAUTH, U.	214	LEE, E.	250	LERASLE, N.	189
LAVABRE, J.	160, 179, 269	LEE, H.	118, 208	LEREDDE, Y.	202
LAVAL, J.-P.	266	LEE, J.-C.	274	LERNER, A.	231
LAVAL, K.	144, 192	LEE, J.D.	196, 197	LERNER, D.N.	150
LAVECCHIA, G.	90	LEE, K.-M.	208	LESCHIUTTA, I.	90
LAVERDET, G.	194-197	LEE, M.	83, 84	LESCLAUX, R.	194, 195
LAVORAL, S.	160	LEE, S.-M.	117	LESNE, O.	77, 78
LAVORATO, M.	184	LEECH, K.	247, 248	LESPINASSE, M.	109, 113
LAVRENTEV, M.M.	121	LEER, E.	223	LESTER, M.	209, 217
LAW, K.	197	LEEUWENBURGH, O.	125	LESUEUR, V.	239
LAW, K.S.	195, 232, 262	LEFEBVRE, B.	216, 223	LESZCZYNSKI, W.	136, 137
LAWRENCE, D.J.	246	LEFEBVRE, J.P.	120	LETH, J.O.	91
LAWRENCE, J.G.	225	LEFEUVRE, F.	211, 221	LETREUT, H.	193
LAXON, S.	130	LEFEVRE, F.	208, 227	LEUENBERGER, J.	147
LAXON, S.W.	125	LEFRANCOIS, L.	199	LEUS, S.G.	210
LAY, G.	213	LEG 173 SHIPBOARD		LEVASSEUR-REGOURD, A.C.	241, 244
LAYER, P.	80	SCIENTIFIC PARTY		LEVCHENKO, I.	153, 154
LAZAREV, A.A.	253	LEGER, A.	248	LEVELT, P.F.	225, 226
LAZARO, C.	127	LEGG, T.P.	203	LEVEQUE, F.	101
LAZARO, R.	276	LEGLER, D.M.	182	LEVEQUE, J.-J.	68, 69
LAZAROU, Y.G.	194-196	LEGOSTAEVA, O.V.	66, 73	LEVI, S.	98
LAZAUSKIENE, J.	73	LEGRAND, J.-F.	66	LEVIN, B.W.	265, 273
LAZURE, P.	167	LEGRAND, M.	177	LEVITIN, A.E.	212
LAZUTIN, L.L.	212	LEGRAND, P.	162	LEVITUS, S.	163
LAZZAROTTO, A.	76	LEGRAS, B.	232, 261, 266	LEVITZ, P.	140
LAZZAROTTO, B.	228	LEGRESY, B.	127	LEV KOV, L.	184
LAZZONI, E.	164	LEGUTKE, S.	183	LEVRET, A.	274
LE BARBE, L.	188	LEHMAN, B.	98, 100	LEVY, C.	225
LE BEGAT, S.	79	LEHMANN, A.	167, 168	LEVY, M.	163, 166
LE BISSONNAIS, Y.	156, 158	LEHMANN, D.	177	LEVY, M.F.	219
LE BRAS, G.	194-197	LEHMANN, R.	131	LEVY, P.E.	176
LE BRUN, B.	277	LEHRER, E.	194	LEVY, V.V.	265
LE CARLIER DE VESLUD, C.	79, 80	LEI, X.	85	LEWANDOWSKI, M.	84, 96, 97
LE CLAINCHE, Y.	169	LEIBROCK, E.	205, 206	LEWCHUK, M.	102
LE CLOAREC, M.-F.	95	LEIBUNDGUT, C.	152	LEWCHUK, M.T.	98
LE FORT, P.	81	LEIBUNDGUT, CH.	154, 156	LEWELING, M.	236
LE GOFF, M.	104	LEICHTFUSS, A.	154	LEWIN, E.	97, 262
LE MEUR, E.	72	LEIDL, R.	139	LEWIS, A.	187

LEWIS, A.C.	197	LOERZER, J.	197, 198	LUNARSAT TEAM	246
LEWIS, R.V.	217	LOEWE, P.	164	LUNATI, I.	141
LEWIS, S.E.	238	LOEWENTHAL, D.	66	LUND JENSEN, S.	83
LEWIS, S.R.	238, 239	LOGACHEV, N.A.	87	LUND, C.E.	83, 84
LEZEAUX, O.	226, 227	LOHMANN, G.	161	LUND, E.J.	214, 223
LI, H.-W.	126	LÖHNERT, U.	184	LUND, M.R.	175
LI, K.	220	LOKMER, I.	88	LUNDBEK HANSEN, D.	70
LI, L.	193	LOKSHYN, YU.	137, 138	LUNDIN, L.-C.	146
LI, S.	209	LOMAX, A.	86	LUNDIN, R.	217
LI, X.	69	LOMBARDO, F.	145	LUNINE, J.	249
LI, Z.	229	LONGDOZ, B.	176	LUNINE, J.I.	248
LI, Z.X.	183	LONGHETTO A.	193	LUNKEIT, F.	232, 258, 261
LIAO, Z.	77	LONGHETTO, A.	269	LUNN, R.J.	139
LIBIN, I.YA.	218	LONGO, A.	93, 278	LUNNON, R.W.	234, 235
LICHNER, L.	147, 148	LONGO, S.	259, 263	LUOSTO, U.	83, 84
LICHTEN, S.	124	LOOHUIS, J.	134	LUPTAK, B.	84
LICHTENBERG, G.	241, 247	LOOHYIS, J.J.P.	70	LURIA, M.	195
LICHTENEGGER, H.	240, 241	LOPES, I.	109, 110, 276	LÜSCHER, P.	101
LIEBAULT, F.	143	LOPES, J.F.	267	LUSTFELD, H.	259
LIEBERMANN, S.S.	177	LOPEZ MALDONADO, J.D.	200	LUTCHITSKAYA, M.V.	80
LIECHTI, D.	272	LOPEZ, A.	186	LUTHCKE, S.B.	124
LIFERMANN, A.	126	LOPEZ, C.	259	LUTHER III, G.W.	199
LIGER, E.	151	LOPEZ, J.	252	LUTHER, M.E.	200
LIGHT, J.P.	103	LOPEZ, O.	171	LÜTHI, D.	155, 190
LIGI, M.	117	LOPEZ, P.	165	LUTHI, S.	108
LILENSTEIN, J.	210	LOPEZ-ALMANSA, F.	276	LUTJEHARMS, J.	166
LILENSTEIN, J.	209, 210, 217, 240	LOPEZ-JURADO, J.L.	172	LUTSENKO, V.	221
LILJEBLADH, B.	168	LOPEZ-MORENO, J.J.	240	LUTSENKO, V.N.	221
LILOVER, M.-J.	168	LOPEZ-SOLER, A.	178	LUTTAZZI, C.	181
LIM, T.	247, 248	LOPEZ-VERA, F.	157	LUX, M.	161
LIMAYE, S.S.	236	LORANT, V.	191	LUZI, L.	275, 279
LIN, C.A.	264	LORBACHER, K.	162	LUZON, F.	91, 277
LIN, N.	242	LORD, L.D.	141	LYARD, F.H.	125
LIN, R.	220, 236	LORENSON, T.D.	118	LYATSKY, W.	217
LIN, R.P.	212, 214, 240	LORENTE, R.	248	LYCK, E.	177
LINDAU, R.	181	LORENZ, F.P.	63, 64, 85	LYKKE-ANDERSEN, H.	68, 90
LINDERMEIR, E.	233	LORENZ, R.	239	LYKOSOV, V.N.	174
LINDH, O.	203	LORENZ, R.D.	239, 243, 244	LYON-CAEN, H.	81
LINDHOLM, C.D.	77	LORENZANI, S.	259	LYSKOVA, E.	75
LINDO, R.	77	LORNE, B.	112	MA, C.	133, 135, 183
LINDORS, V.	187	LORRA, S.	103	MA, C.-C.	183
LINDQUIST, W.B.	108	LORRIMER, S.J.	202	MA, S.D.	109
LINDROTH, A.	175, 176	LOSITO, G.	110	MA, S.Y.	209
LINDSKOG, M.	202, 203	LOSNO, R.	186, 280	MAAS, L.R.M.	162
LINKERT, G.	240	LOTTER, A.F.	101	MACCHIAVELLI, N.	277, 278
LIONELLO, P.	178, 201	LOUANCHI, F.	163	MACCIATO, M.	252
LIPPERT, E.	233	LOUARN, P.	215, 223, 241, 242	MACDOWALL, R.J.	242
LIPS, A.L.W.	81	LOUBET, M.	157	MACEDO, O.	277
LIPS, U.	168, 260	LOUBRIEU, B.	120	MACEDONIO, G.	93, 278
LIS, D.C.	243	LOUCHART, X.	157, 160	MACEK, W.M.	215, 257
LISOV, A.A.	210	LOUDEN, K.E.	116	MACELLONI, G.	155, 280
LISS, P.S.	195	LOUGH, M.	124	MACHARASHVILI, T.	257
LISSAKOV, YU.	273	LOUIS-ROSE, K.	150	MACHETEL, P.	69
LISSAUER, J.J.	248	LOUVAT, D.	151	MACHIN, J.	159
LITHGOW, C.	72	LOUVEL, S.	202	MACHU, E.	126
LITVINE, A.	219	LOVE, J.J.	97, 98	MACKAY, N.	268
LIU, C.-L.	184	LOVEGROVE, A.F.	256	MACKAY, R.	139-141
LIU, C.H.	210	LOVEJOY, S.	65, 192, 215, 252-255	MACKIE, A.	185
LIU, CH.	209	LOVETT, A.	194	MACKENZIE, A.R.	228
LIU, H.	87	LOVHAUG, U.P.	211	MACKIE, R.	114
LIU, H.X.	209	LOWE, J.A.	193	MACPHERSON K.P.	224
LIU, J.Y.	209, 210	LOWRIE, W.	101	MACPHERSON, J.I.	175
LIU, Q.	182	LOYAUX, S.	151	MACQUAR, J.	102
LIU, X.-F.	69	LÓYE-PILOT, M.-D.	199	MADARIAGA, R.	74, 88, 89
LIVENGOD, T.A.	241	LU, H.	118	MADDEN, R.A.	128
LIVI, S.	216, 217, 241	LÜBKEN, F.-J.	207	MADE, B.	151, 158
LIVSHITS, M.A.	215	LUCAS, A.	277	MADEC, G.	166, 191
LIVSHITS, YU.YA.	64	LUCENTE, F.P.	63, 88	MADER, C.L.	268
LIZARRALDE, D.	116	LUCERI, V.	124	MADER, D.	74
LLASAT, M.-C.	160, 269, 270	LUCHETTA, L.	186	MADSEN, H.	201
LLAVONA, J.	109	LUCINI, M.	77	MADSEN, M.B.	250, 251
LLEWELLYN SMITH, S.G.	257	LÜCK, E.	103	MAECHEL, H.	164, 182
LLINAS, O.	163	LUCK, J.-M.	157	MAGAGNOSC, J.S.	279
LLORCA, J.	244	LUCOT, E.	158	MAGALHAES, J.	249
LLORENS, J.F.	156, 157	LUDHOVA, L.	94	MAGALHAES, J.A.	249
LLORENS, P.	148, 152	LUDWIG, B.	158	MAGER, P.	186
LLORRET, A.	111	LUE, H.Y.	209	MAGGIO, F.	91
LLOVET, J.	159	LUESCHEN, E.	82	MAGGIORE, A.	172
LLOYD, J.W.	141	LUGMAIR, G.W.	245	MAGIERA, T.	101
LOBO, A.	154, 157	LUHMAN, J.G.	240	MAGLIULO, R.	278
LOBZIN, V.V.	211	LÜHR, H.	127	MAGLIULO, V.	177
LOCAICEK, T.	89	LUKAS, D.	118	MAGUIN, F.	196, 197
LOCKWOOD, M.	207, 211	LUKAS, R.	163, 181, 182	MAGUIRE, P.K.H.	77, 78
LODER, J.	202	LUKASHIN, V.N.	261	MAGUNIA, A.	114
LODOLO, E.	118	LUKIN, D.V.	265	MAGYARI, O.	90
LOENG, H.	170	LUNA, B.	159	MAHFI, A.	114

MAHJOUR, O.B.	258	MANGIANTI, F.	189	MARRERO, A.	167
MAHNKE, P.	200	MANGIN, A.	157	MARRERO-DOAZ, A.	163
MAHONEY, J.	234	MANGOLD, N.	237, 238	MARROQUIN, A.	234
MAHONEY, J.L.	234	MANLEY, T.	169	MARSALEIX, P.	172
MAI, H.	104, 105, 133, 241	MANN, G.	214, 215, 222, 223, 242	MARSAN, D.	252
MAIA, A.	157	MANN, I.	213, 248, 249	MARSAN, P.	89
MAIA, D.	225	MANN, P.	81	MARSCH, E.	213-215, 224
MAILLARD, J.P.	239	MANNINEN, J.	216	MARSDEN, R.G.	213, 214
MAILLET, N.	199	MANNINEN, R.	216	MARSELLA, E.	74, 86, 114
MAIN, I.	109, 110, 255, 271	MANNOZZI, L.	186, 192	MARSELLA, M.	277
MAIN, I.G.	113	MANOULO, A.V.	228	MARSHAK, A.	185, 254, 257
MAISEY, P.E.	203	MANRUBIA, S.C.	92	MARSHALL, D.P.	166
MAISONGRANDE, P.	107	MANSO ORGAZ, M.D.	191	MARSHALL, G.J.	170
MAISSURADZE, G.	97	MANSY, J.L.	83, 84	MARSHALL, H.G.	211, 213, 240
MAIXNER, U.	184	MANTHEI, G.	91	MARSIAT, I.	189
MAJ, S.	107	MANTILLA, E.	178, 229	MARSLAND, S.	169
MAJEWSKI, D.	177	MANTOVANI, E.	64, 65, 274	MARSMAN, A.	234
MAJEWSKI, E.	69, 75	MANTOVANI, F.	279	MARSON, I.	106, 136, 272
MAKALKIN, A.B.	248	MANZELLA, A.	114	MART, Y.	76, 120
MAKARENKO, G.F.	75, 84	MANZINI, E.	231	MARTANO, P.	176
MAKAROV, N.A.	211	MANZINO, A.	134	MARTEL, F.	172, 173
MAKAROVA, M.G.	276	MARACCHI, G.	144	MARTELET, G.	80
MAKAYA, M.	96, 97	MARAI, C.	235	MARTEN, A.	238, 239
MÄKELÄ, J.M.	192	MARAMAI, A.	268	MARTENS, P.C.H.	225
MAKELA, J.S.	217	MARANI, A.	254, 268, 279	MARTI, J.	94, 95
MAKHIMUDOV, E.DJ.	156	MARANI, M.	199, 252	MARTI, O.	169, 190
MAKIN, V.	202	MARC, V.	154, 160	MARTI-BONO, C.	153, 154
MAKIN, V.K.	182	MARCACCIO, M.	260	MARTIN, D.	205, 206
MAKINEN, J.	72, 122, 127, 136	MARCAK, H.	110	MARTIN, E.	157, 158
MÄKINEN, T.	213, 214, 242	MARCHAL, E.	166	MARTIN, I.	178, 229
MAKINSON, K.	171	MARCHAL, G.	139	MARTIN, J.M.	91
MAKOVSKY, Y.	86	MARCHENKO, A.G.	251	MARTIN, M.	64, 85
MAKRIS, J.	83	MARCHESI, S.	269	MARTIN, P.D.	237
MAKROPOULOS, K.	114, 200, 277	MARCHESINI, C.	136	MARTIN, P.H.	176
MAKROPOULOS, K.C.	274	MARCHETTI, A.	115	MARTIN, T.	170
MAKSIMOVIC, M.	214	MARCHETTI, M.	279	MARTIN, V.	204, 205
MAKSYMCHUK, V.	137, 138	MARCHI, L.	279	MARTINEC, Z.	104
MALACIC, V.	169	MARCHIONI, A.	90	MARTINELLI, G.	112
MALAGUTI, A.	199	MARCHOK, T.	181, 203	MARTINERIE, P.	186
MALAMA, YU.G.	214	MARCO, S.	98	MARTINEU, C.	190
MALAMUD, B.D.	77, 237, 252, 254, 255, 257	MARCOS, J.L.	234	MARTINEZ BENJAMIN, J.J.	125, 126
MALARA, F.	215	MARCUS, C.	136	MARTINEZ, A.Z.	167
MALARDEL, S.	179	MARCUCCI, S.	89, 93	MARTINEZ, C.	82
MALASPINA, F.	150	MARCULLO, S.	172	MARTINEZ, J.	157
MALAVIEILLE, J.	92	MARCUS, S.	132	MARTINEZ, M.	193
MALAVIEILLE, J.	82, 117	MARECHAL, C.N.	199	MARTINEZ, M.D.	91
MALGRAT BREGOLAT, P.	270	MAREEV, E.A.	254	MARTINEZ-CASASNOVAS, J.A.	279
MALGUZZI, P.	178, 179, 201	MARENCO, A.	231	MARTINEZ-GARCIA, M.	218
MALHERBE, J.M.	225	MARENCO, F.	261	MARTINEZ-MENA, M.	152, 159
MALIKOVA, K.SH.	122	MARESCA, R.	92	MARTINI, M.	93
MALIMON, A.N.	120, 121	MARESI, L.	129	MARTINOD, J.	134
MALIN, M.	251	MARGANSKI, S.	137, 138	MARTINOVIC, M.	112
MALINGRE, G.	280	MARGHERITI, L.	88, 89	MARTINS, C.S.	167
MALINGRE, M.	220-222	MARGOLINA, T.M.	255, 257	MARTINS, I.	272
MALINOVSKY, D.N.	142, 151, 152	MARGUERIT, C.	253	MARTINS, J.M.	142
MALINOWSKI, S.P.	256	MARIANELLI, P.	94, 95	MARTINSON, D.	171
MALKIN, Z.	134	MARIETTE, V.	169	MARTINSSON, O.	105, 106
MALKKI, A.	217	MARIGNAC, C.	63	MARTIANOV, S.A.	212
MÄLKKI, A.M.	217	MARINANGELI, L.	237	MARTON, E.	64, 84, 102
MALL, U.	213, 214, 217, 245	MARINONI, L.B.	95	MARTON, P.	102
MALLANTS, D.	139, 147	MARIOTTI, A.	201, 232, 261	MARTY, CH.	176, 177
MALLET, I.	180	MARIOTTI, J.-M.	248	MARTYNENKO, S.I.	209, 210
MALMBERG, S.A.A.	165	MARIUCCI, M.T.	64	MARTYNOV, V.N.	88
MALONE, S.	82	MARIVOET, J.	141	MARUI, A.	149
MALOVA, H.V.	216	MARJANOVIC, M.	137	MARUKAWA, Y.	103
MALSERVISI, R.	70-72	MARKIEWICZ, W.J.	249-251	MARVIN, J.	99
MALTBY, P.	213, 224, 225	MARKKANEN, T.	176	MARZAN, I.	120
MALTSEV, YU.P.	212	MARKOPOULOS, P.	155	MARZANO, F.S.	178
MALUSKI, H.	79	MARKOVA, M.	105	MARZOCCHI, W.	275
MALZ, S.	168	MARKUS, T.	170	MAS-PLA, J.	142
MAMADOU, S.	209	MARKUSIC, S.	64	MASARIK, J.	225
MAMBOLE, A.	68	MARLEY, M.	249	MASCART, P.	179, 180
MAMMOUDIA, M.	100	MARMET, E.	102	MASCHIO, L.	89
MAMUT WORKING GROUP	115, 117	MAROTTA, A.M.	71	MASCLE, J.	76, 119, 120
MAN, O.	102	MAROTTA, G.	159	MASETTI, E.	124
MANCA, B.	172	MAROUF, E.A.	242	MASINA, S.	124
MANCIER, C.	231	MARQUARDT, C.	208, 231	MASLENITSIN, S.F.	242
MANCINI, F.	129	MARQUART G.	77	MASLOWSKI, W.	125
MANDRESCU, N.	271	MARQUES DA SILVA, M.A.	142	MASO, M.	168
MANES, F.	187	MARQUES, F.	109, 110	MASON, D.	118
MANETTI, P.	95	MARQUET, P.	180, 190	MASS, E.	264
MANEUX, E.	199	MARQUIS, G.	75, 108, 113, 114	MASSARI, R.	279
MANGA, M.	263	MARRA, E.	64	MASSON, A.	211
MANGANO, P.	89	MARRA, F.	64, 89, 90, 277	MASSON, F.	68, 82, 83, 87
MANGENEY, A.	215, 222, 239, 278	MARRALE, D.	199	MASSON, V.	174, 189
		MARRARA, F.	277	MASSONNET, D.	123

MASTELLA, L.	84, 85	MCFIGGANS, G.	195-197	MENENDEZ, B.	109
MASTROLORENZO, G.	93, 275	MCGARRY, J.	130, 135	MENENDEZ, M.	160
MASTROILLI, M.	144	MCGEE, T.	118	MENEROUD, J.-P.	277
MATAS, J.	69, 245	MCGINNIS, S.	255	MENEVEAU, C.	253
MATERAZZI, M.	275	MCGRANE, K.	115	MENG, Z.	103
MATERZOK, R.	83	MCGREGOR, J.L.	176	MENGELKAMP, H.-T.	145, 146
MATHE, P.-E.	96, 97, 101	MCQUIRE, W.J.	278	MENGER, S.	200
MATHEWS, P.M.	133	MCKAY, C.P.	239	MENK, F.W.	217
MATHIEU, A.	192	MCKENNA, D.	231, 232, 261, 262	MENKES, C.	166, 191, 260
MATHON, V.	188	MCKENNA, D.S.	227, 230, 261	MENNECHET, C.	79
MATIAS, H.	113	MCKENZIE, J.	223	MENNELLA, V.	242, 244, 247
MATINO, M.	176	MCKENZIE, J.F.	213, 214, 240	MENSHIKOV, Y.P.	83
MATOVA, M.	81, 279	MCLAUGHLIN, R.M.	259	MENSINK, C.	178, 280
MATROSSOV, S.	244	MCMAHON, M.L.	159	MENVIELLE, M.	68, 107, 113
MATSON, D.	237	MCNAUGHTON, K.G.	175	MENZIANI, M.	146
MATSON, D.L.	237	MCRANEY, J.	134	MERCET, C.	110
MATSUDA, I.	277	MCSHARRY, P.	256	MERCIER, F.	128, 129
MATSUKI, K.	110	MCSWEEN, H.Y.	249	MERCIER, H.	124, 161, 162, 166
MATSUMOTO, R.	118	MCWILLIAMS, J.	166	MERCIER, P.	261
MATSUMOTO, S.	272, 273	MCWILLIAMS, J.C.	266	MERCURIEV, S.	119
MATSUMOTO, T.	115	MCWILLIAMS, M.O.	98	MERDADI, O.	99
MATSUNAGA, T.	246	MEBOLD, H.	184	MEREDITH, P.	88
MATTEL, M.	101	MECHIE, J.	77, 78	MEREDITH, P.G.	112
MATTEUCCI, G.	260	MECHOSO, C.R.	183, 232, 261	MERKA, J.	221
MATTHEWS, S.	225	MEDERNACH, L.	199	MERLINE, W.J.	237
MATTHEY, R.	228	MEDINA, A.	94, 140	MERLIVAT, L.	163, 170
MATTHIESEN, S.	172	MEDINA, P.	259	MERMOUD, A.	142
MATTIOLI, G.S.	95, 278	MEDINI, R.	184	MEROT, P.	157
MATTSSON, H.	96, 97	MEDMEX GROUP	172	MERRIAM, D.F.	73, 110
MATVEIV, V.	195	MEDVEDEV, S.B.	264	MERTIKAS, S.	82, 129, 134, 135, 272
MATVICHUK, YU.N.	211, 218	MEHL, G.A.	193	MERTZ, F.	130
MATYASOVSKY, I.	175, 193	MEGALOVASILIS, P.	200	MERVART, L.	137
MATYSKA, C.	72	MEGHRAOUI, M.	90, 274	MERZ, B.	148
MATZ, K.-D.	249, 251	MEGIE, G.	226	MERZ, CH.	151, 156
MAUCHER, G.	227	MEGRAOUI, M.	89	MERZLYAKOV, E.G.	211
MAUFFRET, A.	79, 86, 87, 120	MEHRA, A.	169	MESSIAS, M.	161
MAUFRETT, A.	86	MEHRINGER JR., P.J.	103	MESSINA, P.	89
MAUGERI, M.	179	MEHRINGER, D.	243	METHVEN, J.	232, 261
MAURER, H.	103	MEHRTENS, H.	227	METRICH, N.	94
MAURER, M.	156	MEIER, A.	227, 233	METRIS, G.	124
MAURICE, S.	223, 240, 241, 246	MEIER, P.	140	METZ, W.	165
MAURIN, J.-C.	75	MEIER, R.	247	METZGER, E.J.	202
MAURITSCH, H.J.	85, 102, 104, 106	MEIJER, E.W.	232	METZIG, R.	126, 128
MAURITZEN, C.	164, 165	MEIJER, P.T.H.	64, 70	MEULENKAMP, J.E.	63
MAURIZI, A.	259	MEIN, P.	225	MEUNIER, A.	109
MAURY, A.	246	MEINCKE, J.	162	MEVEL, C.	117
MAUSER, W.	153	MEINCKE, O.	256	MEYER, A.	279
MAVROCORDATES, C.	245	MEISSNER, R.	84	MEYER, H.	115
MAWER, C.K.	76	MEISTER, C.-V.	211, 212, 214	MEYER, K.	108
MAY, R.D.	231	MEISTER, C.V.	212	MEYER, R.	170, 171
MAYAUX, P.	107	MELADZE, H.	264	MEYER, U.	130, 200, 201
MAYER, G.	209	MELCHIORRE, G.	268	MEYER-VERNET, N.	213, 222
MAYER, M.	141	MELDRUM, D.	170	MEYERER, TH.	238
MAYHEW, M.	236, 240	MELE, F.	89	MEYUS, Y.	141
MAYNARD, K.	192	MELE, G.	277	MEZIANE, K.	212
MAYNARD, N.	217	MELENTYEV, V.V.	155	MGUIRE, P.K.H.	77
MAYOR, M.	248	MELFI, S.H.	184	MI, Y.	118
MAZAUD, A.	98	MELIA, J.	159	MICHAELIS, H.	241, 246
MAZELLE, C.	212, 222, 236, 240	MELICHAR, P.	102, 103	MICHAELIS, W.	149
MAZEROLLE, F.	109	MELIKECHI, A.	185	MICHAELS, A.F.	163
MAZUKINA, S.I.	142	MELINOTTE, J.-M.	107	MICHALLET, H.	257
MAZZA, S.	89	MELIS, N.	91	MICHALSKI, K.	84
MAZZANTI, M.	92	MELLES, M.	99	MICHEL, C.	160
MAZZEGA, P.	202	MELLOR, D.	268	MICHEL, G.	81
MAZZINO, A.	264	MELLOUKI, A.	194, 195	MICHEL, P.	246
MAZZOLI, S.	81, 89	MELNIKOVA, I.	229	MICHEL, R.	123
MBARTZOS, E.	82, 134, 272	MELNIKOVA, I.N.	229	MICHELANGELO, P.-A.	191
MCADOO, D.C.	130	MELONEK, M.	203	MICHELINI, A.	65, 89, 90
MCALLISTER, E.	113	MELONI, D.	228	MICHETTI, A.M.	89, 274
MCCANN, T.	84	MELSOM, A.	167	MIDDLETON, M.F.	74, 108
MCCARTNEY, M.S.	161, 164, 165	MELTCHOUK, B.	176, 271	MIENERT, J.	118
MCCCLIMANS, T.A.	167	MELZER, J.	106	MIFTAHOVA, E.G.	222
MCCLOSKEY, J.	88, 252	MEMERY, L.	163, 166, 260	MIGON, C.	198, 199
MCCCLUSKY, S.	81	MEMMESHEIMER, M.	178, 226, 227, 231	MIHAJLOVIC, J.S.	106
MCCOMAS, D.J.	213	MENA, U.	276	MIHAJLOVIC, LJ.	189
MCCORD, T.B.	237	MENAND, T.	95	MIHAJLOVIC, S.	189
MCCULLOCH, M.E.	181	MENARD, Y.	200, 202	MIHAJLOVIC, S.J.	218
MCDERMID, I.S.	208	MENDES VICTOR, L.	113	MIHALOPOULOS, N.	187, 204-206, 280
MCDERMITT, D.K.	176	MENDES, V.B.	123, 129, 135	MIHELIC, D.J.	196, 197
MCDERMOTT, C.	139	MENDES-VICTOR, L.A.	264, 265, 272	MIHELE, C.M.	194, 196, 197
MCDONNELL, G.	103	MENDICINO, G.	270	MIKHAILENKO, B.G.	88
MCENTIRE, R.W.	220	MENDIONDO, E.M.	139	MIKHAILOV, A.	218, 219
MCEWEN, A.	237	MENDONCA LEITE, S.	177, 191	MIKHAILOV, A.V.	218, 219
MCFADDEN, J.	217, 236, 240	MENDOZA, V.M.	203	MIKHAILOV, YU.M.	242, 267, 273
MCFADDEN, J.	236, 240	MENDUNI, G.	270, 271	MIKHAILOVA, E.N.	167
MCFARLANE, S.A.	192	MENEGUZZO, F.	144, 145, 270	MIKHAILOVA, G.A.	273

MIKHAILOVA, N.P.	83	MODZELEWSKI, H.	174	MORELLI, S.	269
MIKKELSEN, T.	177, 178	MOEHRLENS, C.	146	MORENO, A.	153, 154, 269
MIKOLAJEWICZ, U.	161	MOGENSEN, C.T.	250, 251	MORENO, E.	100
MILAN, S.E.	209, 217	MOGILEVSKY, M.	221	MORENO, J.	280
MILANA, G.	89, 90, 93	MOGILEVSKY, M.M.	221	MORENO, J.M.	159
MILANOVSKY, S.	78, 92	MOHLER, C.L.	153	MORENO, P.	260
MILDE-PIORKO, M.	83	MOHR, J.J.	127	MORENO, R.	238, 243
MILES, P.R.	115	MOHRATH, D.	148	MORGAN, H.	250
MILESI, J.P.	79, 80	MOINE, M.-P.	180	MORGAN, P.	123
MILETENKO, N.V.	73	MOISAN, E.	209	MORGAN, W.J.	78
MILFERSTÄDT, D.	184	MOISEEV, S.S.	178, 179, 253, 264, 265	MORGENSTERN, K.	146
MILIA, A.	74	MOISEYENKOVA, S.V.	66, 67	MORHANGE, C.	122
MILIVOJEVIC, M.	112	MOITINHO, I.	276	MORI, M.	103
MILLAN, M.	178, 229	MOJZES, M.	136	MORISON, J.	169
MILLAN-GARRIDO, H.	102	MOLDER, M.	176	MORIYA, T.	89
MILLER, A.	181	MÖLDERS, N.	155, 175, 185, 203	MORLIERE, A.	166
MILLER, A.J.	190	MOLDOVEANU, C.L.	277	MÖRNER, N.-A.	65, 66, 71, 72, 96, 97, 101, 132, 190, 225, 268, 271
MILLER, H.	130	MOLEMAKER, M.J.	165	MORO, M.	89
MILLER, J.A.	108	MOLENAT, J.	151, 153, 157	MOROVIC, M.	169, 254
MILLER, K.C.	83, 84	MOLENDIJK, R.E.	122	MOROZ, I.M.	238, 256
MILLER, M.	203	MOLIN, D.	274	MOROZ, L.	244
MILLER, S.A.	74	MOLINA-CUBEROS, G.	240	MOROZOV, E.G.	254
MILLET, A.	158	MOLINES, J.-M.	202	MOROZOV, O.L.	80
MILLING, D.	220	MÖLLER JR, O.	162	MOROZOV, V.N.	71
MILLOT, C.	165-167	MÖLLER, D.	229	MOROZOVA, E.	221
MILLS, G.	232, 262	MÖLLER, I.	66	MOROZOVSKY, E.	179
MILNE, G.	71	MÖLLER, P.	112	MORRICE, J.A.	148
MILNE, G.A.	71, 72	MÖLLER, P.J.	120	MORRIL, J.S.	225
MILODOWSKI, A.E.	139	MOLteni, F.	193	MORRIS, G.A.	227
MILOVANOV, A.V.	215	MOLUS, I.	178	MORRIS, M.Y.	162
MILOVSKY, R.	84	MONA LISA WORKING GROUP	83	MORRIS, P.	247, 248
MILTON, S.F.	202	MONACHESI, G.	89, 90, 274	MORRIS, P.W.	248
MIN-WEI, Q.	269	MONCRIEFF, J.B.	176	MORRIS, R.J.	217
MINCIARDI, R.	154	MONCUQUET, M.	213, 222, 242	MORROW, R.	125, 126
MINGUZZI, E.	268	MONGELLI, F.	73	MORSELLI, M.G.	174
MINIKIN, A.	194	MONIE, P.	81, 198	MORSS, R.	181
MINSHULL, T.A.	116-118	MONKS, P.S.	177, 196, 197	MORTENSEN, M.	129
MINSTER, J.B.	130	MONNIER, B.	234, 235	MORTIER, L.	167, 172, 173, 198
MINSTER, J.F.	128	MONTAGNIER, J.P.	115	MOSAEDI, A.	269
MIQUEL, J.C.	163	MONTALDO, N.	255	MOSANGINI, C.	238, 251
MIRABEL, PH.	195	MONTANARI, A.	145, 146	MOSAR, J.	63, 84
MIRANDA, J.M.	267, 274	MONTANI, A.	181	MOSBAEK, H.	149
MIRANDA, J.V.	73	MONTEIRO SANTOS, F.A.	113	MOSCONI, A.	74
MIRANDA, P.M.A.	176, 177, 179	MONTELLI, R.	67	MOSE, R.	142, 157
MIREAULT, Y.	124	MONTENEGRO, C.D.	108, 139	MOSER, F.	63
MIRKOTAN, S.F.	210	MONTENEGRO, H.	148, 156	MOSERT DE GONZALEZ, M.	218
MIRO, J.V.	178	MONTES, J.-M.	270	MOSETTI, R.	260
MIRONOV, D.V.	174	MONTGOMERY, M.	266	MOSHFEGHLAN, M.	118
MIRONOVA, N.A.	77, 78	MONTMERLE, T.	180	MOSKALEVA, L.	245
MIRZA, A.M.	223	MONTONE, P.	64, 90	MOSQUERA, J.C.	268
MISEROCCHI, S.	199	MONTOTO, M.	109	MOSS, J.L.	278
MISHIN, E.	216	MOOG, H.	111	MOSSINGER, J.	194-196
MISNHULL, T.A.	116	MOONEY, W.D.	70, 77, 83, 86	MOSTERT, E.	153
MITA, D.G.	93	MOORE, G.W.K.	181	MOSZUKHINA, A.	221
MITCHELL, C.N.	210	MOORE, H.	251	MOTOVILOV, YUG.	144, 146
MITCHELL, D.	236, 240	MOORE, H.J.	251	MOTSCHMANN, U.	223
MITCHELL, D.L.	185	MOORE, J.	237	MOTTOLA, S.	241, 246
MITCHELL, N.J.	207, 209	MOORE, J.A.	179	MOTUZA, G.	83, 84
MITEV, V.	228	MOORE, J.M.	237	MOTZ, G.B.	178
MITHCELL, D.L.	240	MOORE, R.D.	152, 153	MOUKIS, C.G.	222
MITIN, I.V.	227	MOORE, W.	237	MOUILLOT, F.	160
MITINA, N.N.	144	MOORTGAT, G.K.	188, 193-195	MOUND, J.E.	72
MITROFANOV, G.	86, 88, 110	MORAKINYO, J.A.	140	MOUNT, J.	101
MITROVICA, J.X.	71-73, 127, 134	MORAKINYOL, D.	139	MOUNTRAKIS, D.	81
MITSKEVITCH, A.V.	244	MORALES MAQUEDA, M.A.	169	MOUNTRAKIS, D.M.	80
MITYAGINA, M.I.	253	MORAN, P.J.	213	MOURA, D.	241
MIX, W.	173	MORAT, P.	158	MOURE, J.C.	164, 165
MIYAZAKI, S.-I.	272	MORATA, D.	68	MOURTADA-BONNEFOI, C.C.	95
MIYAZAKI, T.	113	MORBIDELLI, A.	246	MOUSSA, R.	153, 253
MIZARA, A.	159	MORCLETTE, J.-J.	228	MOUSSIOPOULOS, N.	185
MIZUTANI, H.	245	MORCLETTE, J.J.	254	MOZER, F.S.	211
MJELDE, R.	116	MORDELET, P.	157	MOZER, F.Z.	216
MJOLHUS, E.	211	MORDVINOVA, V.V.	67, 87	MOZHI, T.	263
MLADENOVIC, M.	105, 106	MOREAU, D.	238	MRLINA, J.	103, 105, 106
MLCH, P.	208, 218	MOREAU, E.	109	MROCZEK, S.	106
MLKKI, A.	220	MOREAU, F.	106	MT. BELBOURNE	
MO, K.C.	165	MOREAU, P.	243	GEOPHYSICAL GROUP	278
MOAKHAR, M.O.	68	MOREAU, PH.	243	MU MU	263
MOAT, B.I.	182	MOREAU, R.	259	MUALEM, Y., ASSOULINE, S.	160
MOBBS, S.D.	174	MOREDA, F.	153	MUCCI, A.	199
MÖBIUS, E.	214, 223	MOREIN, G.	252, 255	MUCCIARELLI, M.	274
MOCHIDA, M.	195	MOREL, C.	179	MUCHNAYA, V.I.	271
MOCHIZUKI, K.	82	MOREL, Y.	166	MUELLER, G.	150
MOCQUET, A.	68, 80, 236	MOREL, Y.G.	168, 266	MUELLER, H.J.	111
MODESTI, F.	178	MORELL, I.	142, 157	MUELLER, J.F.	233
MODIGLIANI, A.	225	MORELLI, A.	65, 69, 89		



MUELLER, L.	141	NAEF, F.	270	NEUBAUER, F.M.	92
MUELLERSCHOEN, R.	124	NAEJE, M.	125, 126	NEUBAUER, W.	102, 103
MUENCH, R.	170	NAGAO, K.	93	NEUBER, R.	204, 205
MUENCH, R.D.	170, 171	NAGHETTINI, M.C.	269	NEUDEGG, D.A.	217
MUGNAI, A.	178, 179	NAGY, A.F.	240	NEUER, S.	163
MUGNIER, J.L.	81	NAGY, G.J.	162	NEUKUM, G.	135, 136, 237, 238, 241, 245, 246, 251
MUGNUOLO, R.	241	NAGYMAROSY, A.	90		
MUHLEMAN, D.O.	238, 249	NAIK, N.	164, 166	NEUMAIER, P.	123, 136
MUHLEMAN, D.O.	238	NAIMARK, B.	76	NEUMAYER, K.H.	130
MÜHLMANN, W.	129	NAIZET, F.	103	NEUMEYER, J.	122
MUHTAROV, P.	219	NAJJAR, G.	158	NEVEN, E.C.	266
MUINONEN, K.	236, 242, 246	NAKAI, M.	103	NEWBY, P.	135
MUKAI, A.	272, 273	NAKAMURA, S.	201	NEWELL, A.C.	263
MUKAI, T.	211, 212, 217, 220	NAKAO, S.	272, 273	NEWMAN, C.E.	238
MUKASHEV, K.	71	NAKAZAWA, K.	243	NEZLIN, M.	265
MUKHAMADIEV, R.	100	NALBANT, S.	275	NEZLING, M.V.	265
MULARCHIK, T.	220, 222	NAMGALADZE, A.A.	218	NG, T.C.	246
MULARGIA, F.	94, 278	NAMIKI, N.	245	NGUYEN, K.D.	167
MULCAHY, C.	159	NANDAKA, I.G.M.A.	278	NGWENYA, B.T.	113
MULIARCHIK, T.M.	221	NANNI, T.	225	NICASTRO, S.	201, 265
MULLEN, S.L.	256	NAPOLI, R.	278	NICASTRO, S.	265
MÜLLER, A.	114	NAPOLITANO, E.	260	NICE UNIVERSITY RESEARCH GROUP	89
MÜLLER, A.B.	275, 276	NARDI, A.	134, 136	NICOLAS, E.	198, 199
MÜLLER, B.	76, 85	NARDI, G.	102	NICOLAS, M.	81
MÜLLER, CH.	267	NARDIN, M.	86, 115	NICOLAS, P.	169
MÜLLER, F.	178	NASEDKIN, V.	83, 84	NICOLESCU, A.	106
MULLER, H.G.	207	NASONOV, A.E.	175	NICOLETTI, P.G.	276
MÜLLER, I.	139, 141, 142	NASRIFAR, KH.	118	NICOLLEAU, F.	259
MÜLLER, J.	66, 127, 151, 185, 228, 233	NASS, H.U.	213	NICOLLIN, F.	70
MULLER, J.-D.	66	NASTROM, G.D.	207	NIELL, A.E.	129, 130
MÜLLER, J.-F.	228, 233	NASTULA, J.	132	NIELSEN, A.H.	265
MULLER, J.F.	225	NATALE, G.	92-94, 277	NIELSEN, C.S.	127
MÜLLER, K.M.	208	NATALI, S.	179	NIELSEN, E.	209, 242
MULLER, K.P.	227	NATIV, R.	147	NIELSEN, L.	66
MÜLLER, M.	92	NATIVI, S.	279	NIELSEN, S.B.	70
MULLER, M.R.	117	NATVIK, L.-J.	202	NIEMANN, J.D.	252
MÜLLER, R.	227	NAUDIN, J.J.	167	NIEMI, A.	141
MULLER, S.	66	NAUJOKAT, B.	207, 208	NIESSNER, R.	142, 147
MÜLLER, T.G.	247	NAVAREZ-MARRON, J.	83	NIETO BORGE, J.C.	200, 201
MÜLLER, T.J.	163	NAVARRA, A.	124, 183, 191	NIHOUL, J.	260
MÜLLER-MELLIN, R.	223	NAVARRO, M.	91, 276, 277	NIKIFOROV, S.	170
MÜLLER-WODARG, I.C.F.	211	NAVAS, A.	159	NIKITIN, M.J.	276
MULLIGAN, M.	160	NAVASCUES, B.	202, 203	NIKOLAEVA, N.	217, 220, 221
MULS, A.	134	NAVEIRA GARABATO, A.C.	171	NIKOLAEVA, N.S.	221
MULUGETA, G.	77, 108	NAWROCKI, J.	83, 99	NIKOLAOU, N.	276
MUMMA, M.J.	238	NAYLOR, D.A.	246-248	NIKOLOVA, S.B.	272
MÜNCH, U.	117	NAZARENKO, S.	266	NIKUTOWSKI, B.	221
MUNHA, J.M.	267	NAZAREVYCH, A.V.	85, 257, 272, 273	NILSEN, J.E.O.	163
MUNNS, J.W.	76	NAZAREVYCH, L.YE.	85, 92, 272, 273	NILSEN, K.	76
MUNOZ MARTIN, A.	64	NEBEN, S.	115	NILSSON, H.	231
MUNTZER, P.	142	NECHAEV, D.	201	NILSSON, S.	203
MÜNZENBERG-ST. DENIS, A.	177, 229	NECHAEV, O.YU.	272	NIMS TEAM	237
MURAKAMI, F.	115	NEDELEC, P.	231	NIRUPAMA	146
MURAKAMI, H.	245	NEDUNURI, K.V.	150	NISHIZAWA, A.	115
MURANTE, G.	266	NEEB, P.	187, 188	NISHIZAWA, O.	85
MURCHIE, S.M.	249	NEFEDKINA, T.	88, 110	NISTA, A.	244
MUREAU, R.	203	NEGA, M.	81	NITTA, N.	225
MURPHY, J.	249	NEGENDANK, J.W.F.	97, 98	NITTIS, K.	166
MURPHY, J.R.	249	NEGMATULLAEV, S.H.	210	NIVIERE, B.	75
MURPHY, T.	105, 106	NEGREDO, A.	63, 75	NJOS, A.	154
MURRAY, M.J.	202	NEGREDO, A.M.	64, 71	NOACK, T.	277
MURRAY, S.	161	NEGRI, S.	103	NOCI, G.	213, 225
MURRAY, S.P.	161, 167	NEGRO, G.	103	NOEL, M.	103
MURRAY, T.A.	113	NEGUSINI, M.	129	NOEL, O.	117
MUSACCHIO, G.	77, 83, 86	NEISHTADT, N.M.	112	NOEL, S.	225
MUSAT, I.	183	NEISSER, J.	175	NOENS, J.C.	225
MUSHIN, I.A.	73	NELANDER, B.	194, 195	NOETINGER, B.	140
MUSLIMOV, R.C.	78	NELSON, J.M.	143	NOF, D.	162
MUSSON, R.	271	NELSON, R.	246	NOGI, Y.	82
MUSSON, R.M.W.	274	NEMCOK, M.	85	NÖHREN, I.	200
MUSTSEVOJ, V.V.	265	NEMECEK, Z.	217, 220-222	NOILHAN, J.	157, 176
MUSUMECI, C.	82	NEMETH, B.	87	NOLET, G.	63, 67, 70, 78
MUSY, A.	152	NEPRIMEROV, N.N.	152	NOLL, K.	247
MUTEN, T.	141	NERCESSIAN, A.	86	NOOMEN, R.	123, 133, 134
MUTTONI, G.	63, 101	NERCESSION, A.	86	NORDSTROM, C.	177
MUZY, J.-F.	254	NEREM, R.S.	104, 128	NOREGOL, M.	164, 165
MYERS, P.G.	165, 172	NERI, A.	93, 278	NORMARK, E.	90, 91
MYRABO, S.	140	NERI, G.	92	NORRO, A.	172
NABELEK, P.	94	NERRY, F.	107	NORSTROEM, C.	174
NACHAPKIN, N.I.	106	NESEMANN, M.	130, 200, 201	NORSTROM, C.	176
NACHTNEBEL, H.P.	143	NESS, N.F.	236, 240	NORTON, W.A.	190
NADEAU, M.	235	NESTER, K.	178	NOSOV, M.A.	265, 268
NADEN, P.	269	NESTI, G.	123	NOSTRO, C.	75, 88, 90, 275
NADOR, A.	73	NESVORNY, D.	246	NOTARIO, A.	194, 195
NAE, F.	269	NEU, U.	228	NOTHNAGEL, A.	134
NAEF, D.	248	NEUBAUER, F.	74, 84, 85, 214, 240		

NOTHOLT, J.	204, 205	OLIVER, R.	213	OYOLA, P.	230
NOTO, J.	210, 218	OLIVERI, S.	279	OYONO, E.	139
NOVIKOV, A.	135	OLIVET, J.L.	116	ÖZCEP, F.	102
NOVOTNA, D.	257	OLIVIERI, M.	69, 89	ÖZDEMİR, Ö.	96-99
NOWACZYK, N.R.	97-99	OLLIKAINEN, M.	134	OZEL, E.	119
NOZAWA, S.	209, 210	OLLITRAULT, M.	161	OZEL, N.	89
NOZDRACHEV, M.	217, 220, 221	OLMO, F.J.	175	OZOLIN, Y.E.	186
NOZDRACHEV, M.M.	220	OLSZEWSKI, R.	136, 137	PACCAGNELLA, T.	268
NOZDRACHEV, M.N.	221, 222	OLTCHEV, A.	146	PACE, D.	235
NUCCIO, P.M.	95	OMURA, M.	272, 273	PACHECO, A.F.	252
NULLANS, S.	79	ONCKEN, O.	82, 83	PACHECO, M.	163, 167
NUNES, T.	187	ONDRAK, R.	83, 84	PACHUTA, A.	137, 138
NUNN, D.	212, 216	ONKEN, R.	172	PACHUTA, K.	148
NURGALIEV, D.K.	97, 100	ONOF, C.	252, 253, 268	PACIONE, R.	72, 134, 136
NURMI, P.	203	ONORATO, M.	263, 264, 267	PACKWOOD, C.R.X.	150
NURSEY, K.	123, 134	OOE, M.	245	PADILLA, F.	142, 143
NUTH, J.	243	OPGENOORTH, H.J.	217	PADULA, M.	279
NÜTZMANN, G.	141	OPRSAL, I.	91	PAERLI, R.	214
NUZZO, L.	103	OPSTEEGH, J.D.	165, 203	PAETH, H.	164
NYCANDER, J.	168	ORAL, E.Z.	119	PAGARETE, J.	123
NYEKI, S.	280	ORANGE, D.	253	PAGLIACCI, S.	279
NYGAARD, E.	171	ORBADOVIC, M.	189	PAGLIARA, S.	144, 145, 270
NYSET, M.	66	ORBAY, N.	102	PAGLIARIN, A.	225
NYST, M.	70	ORBONS, P.J.	102, 103	PAHLOW, M.	146
NZE ABEIGNE, C.-R.	65	ORCUTT, J.A.	117	PAILLOU, PH.	238
O'CONNELL, P.E.	144, 146, 154, 268	ORESHIN, S.I.	87	PAKA, V.T.	168
O'CONNELL, R.J.	69, 72, 263	ORI, G.G.	237	PAKLAR, G.B.	169
O'CONNOR, R.M.	109	ORLANDI, P.	266	PAKZAD, M.	91
O'DOHERTY, K.	88	ORLANDINI, S.	146, 154	PALACIOS, M.	124
O'DOWD, C.D.	195	ORLANDO, S.	213, 214, 224	PALANQUES, A.	167, 168
O'DWYER, J.	166	ORMOND, A.	158	PALAU, J.L.	178
O'KANE, J.P.	144, 148	OROFINO, V.	237	PALDOR, N.	260
O'NEAL, R.	225	OROSEI, R.	244	PALK, M.	74
O'NEILL, A.	228, 231	OROZOVA, I.	64	PALLADINO, D.M.	93
O'REILLY, B.M.	105, 106, 115	ORPHAL, J.	194, 195	PALLIER, L.	241
O'RIORDAN, C.	198	ORR, M.H.	263	PALMER, T.	203
OANCEA, V.	88, 269	ORSI, G.	95	PALMER, T.N.	203, 255
OBERC, P.	241	ORSOLINI, Y.J.	226, 227	PALMIERI, G.	74
OBERHUBER, J.M.	126, 167	ORTIGOSA, L.	160, 279	PALMIERI, S.	189, 228
OBERLIN, G.	157, 269, 270	ORTIZ BEVIA, M.J.	162, 166, 191	PALMISANO, E.	279
OBERST, J.	237, 245, 246, 249, 251	ORTIZ, L.	112	PALMROTH, S.	176
OBLED, CH.	157, 158, 268	ORTIZBEVIA, M.J.	255	PALO, S.	211
OBOJSKA, L.	215	ORTOLEVA, P.	158	PALO, S.E.	211
OBOLENTSEVA, I.R.	88	ORTON, G.	239, 247	PALOMBA, E.	244
OBRADOVIC, M.	106, 218	ORTON, G.S.	246-248	PALOMERA, I.	168
OBRIZZO, F.	92, 277	ORTUANI, B.	140, 141	PALOSCIA, S.	155, 280
OCAMPO, A.	237	ORWELL WORKING GROUP	115, 117	PALUMBO, F.	73
OCAMPO-TORRES, F.J.	200	OSBALDESTIN, A.H.	259	PALUMBO, M.E.	243
OCHES, E.A.	99	OSBORNE, A.R.	263, 264, 267	PALUMBO, P.	241, 242, 247
ODEGAARD, J.	90	OSBORNE, R.	73	PALUS, M.	257
ODIER, P.	254	OSBOURN, R.J.	113	PALVA, L.	176
ODINTSOV, S.D.	106	OSCHLIES, A.	181, 202, 260	PAMBIANCHI, G.	275
ODP LEG 176 SCIENTIFIC PARTY	117	OSHRI, O.	264	PAMIC, J.	102
ODP LEGS 149/173, DISCOVERY		OSIPENKO, N.	268	PAMMENT, J.A.	232
CRUISE 215 SCIENTIFIC PARTIES	116	OSORIO, J.	81, 127	PAMPALONI, P.	155, 280
OELHAF, H.	227	OSORIO, R.	103	PAN, C.J.	210
OETTINGER, G.	80, 113	OSTAPENKO, A.A.	212	PANAGIOTARAS, D.	200
OETZEL, K.	266	OSTERHUS, S.	163, 165	PANAGOULIA, D.	145
OFFERMANN, D.	184, 208	OSTROVSKII, A.G.	167	PANAOTU, C.	84
OFFILER, D.	134	OSTROVSKY, L.A.	263, 264	PANAOTU, C.E.	84
OFTERDINGER, U.	139	OSTROVSKYJ, A.	137, 138	PANAPOULOU, G.	278
OGATA, Y.	271	OSTROWSKI, M.W.	154	PANARINA, G.I.	78
OGAWA, Y.	209, 210	OSWALD, B.	148	PANCHELUGA, V.A.	210
OGE, J.	177	OSZCZAK, S.	136	PANCHEVA, D.	208
OGILVIE, S.	110	OTAKE, H.	246	PANDEY, G.	252
OGREN, J.	229	OTSMANN, M.	168	PANFYOROV, O.	176
OGUNJEMIYO, S.O.	175	OTSUKA, S.	272, 273	PANIN, G.N.	174, 175
OGUZ, T.	260	OTT, C.	158	PANIZZA, M.	276, 279
OHMURA, A.	176, 177, 185, 186	OTTENBREIT, M.	149	PANKOV, V.L.	68, 69
OHNAKA, M.	74	OTTERMAN, J.	189	PANKOV, V.M.	264
OHTANI, T.	108, 113	OTTLE, C.	107, 157	PANKRATZ, L.W.	107
OIKARINEN, A.	216	OUAHSINE, A.	167, 260	PANNE, U.	147
OJEDA, G.	279	OUBERDOUS, M.	125	PANTONE, M.	268
OKI, T.	155	UDOT, C.	161	PANY, T.	137
OKUBO, P.	92	OUI, O.	119	PANZA, G.	77, 106
OLAETA, I.	230	OUILLO, G.	81	PANZA, G.F.	64, 65, 76, 89,
OLALLA, R.	179	OUILLO, S.	167		91, 256, 271, 277
OLBERS, D.	266	OUM, K.W.	195	PAONITA, A.	95
OLDHAM, P.G.	246-248	OUTKIN, V.	273	PAPADIMITRIOU, E.E.	271
OLESEN, A.	130	OUZOUNIS, A.	81	PAPADOPOULOS, G.	267, 272, 275, 278
OLESEN, A.V.	130, 200, 201	OVCHINNIKOV, L.M.	167	PAPADOPOULOS, G.A.	272
OLESEN, O.	77	OVCHINNIKOV, M.N.	141, 152	PAPAGEORGIOU, E.	169
OLEYNIKOV, A.N.	209, 210	OWEN, C.	220	PAPAGIANNAKOPOULOS, P.	194-196
OLIOSO, A.	146, 157	OWEN, T.	239, 243, 247	PAPAIOANNOU, G.	155, 176
OLIVAR, M.P.	168	OWENS, W.B.	162	PAPALE, P.	93
OLIVEIRA, C.S.	274, 276, 277	OXENTIOUK, A.	133	PAPARO, G.	272

PAPAYANNIS, A.	226, 227, 261, 280	PAYATAKES, A.C.	150	PERNER, D.	193
PAPAZACHOS, B.C.	271	PAYO, G.	64	PEROSANZ, F.	124
PAPAZACHOS, C.	78, 79, 277	PE-PIPER, G.	92	PEROV, S.P.	207
PAPE, H.	110	PEACH, C.J.	108	PEROV, V.	202
PAPKE, F.	179	PEACOCK, D.	113	PERRAUT, S.	220-222, 241, 242
PAPOULIA, J.	65	PEACOCK, D.C.P.	113	PERRET, D.	275, 279
PAPP, G.	105	PEACOCK, N.R.	125	PERRIER, C.	248
PAPPALARDO, G.	279	PECE, R.	93	PERRIER, E.	109, 139
PAPPALARDO, R.	237	PECHER, I.	118	PERRIER, F.	112, 113
PAPPALARDO, R.T.	237, 238	PECHER, I.A.	117, 118	PERRIN, M.	98
PAPPARDO, R.	237	PECHER, L.A.	118	PERROT, J.	88
PAPRITZ, A.	147, 148	PECHNIG, R.	78	PERROUD, H.	90
PARADIS, S.J.	279	PECK, J.	114	PERRY, C.H.	216
PARADISI, P.	260	PECKHAM, S.D.	154	PERSSON, K.	231
PARADES, J.	156	PECKNOLD, S.	252	PERSSON, P.O.G.	179
PARES, J.M.	101, 102	PEDDER, M.A.	166	PERSSON, T.	186, 280
PARAY, S.	190	PEDERSEN, A.	211, 222	PERUMAL, M.	146
PARI, G.	92, 104	PEDERSEN, C.T.	250, 251	PERUZZA, L.	65
PARION, P.	220	PEDERSEN, H.	79, 80	PESCHKE, S.B.	247
PARISE, M.	275, 276, 279	PEDERSEN, T.S.	148	PESCI, A.	90
PARISOT, F.	200	PEERI, S.	134	PESEC, P.	136
PARK, J.-O.	71	PEETERS, P.	228	PESMAJOGLOU, S.	151
PARK, J.H.	208	PEGRAM, G.	145	PETELET, E.	157
PARK, S.K.	256	PEIFFER, S.	151	PETER, R.	226, 227
PARKER, B.B.	200	PEINE, A.	151	PETER, T.	227
PARKER, D.	141, 180, 188	PEIPE, J.	251	PETER, Y.	81
PARKER, D.E.	190	PEJOUX, R.	254	PETERS, C.	96, 103
PARKER, E.	99	PEKELA, W.D.	234	PETERS, D.	164, 226
PARKER, S.C.	108	PELEG, M.	195	PETERSEN, C.C.	213
PARKER, T.J.	251	PELEGRO, J.L.	163, 167	PETERSEN, O.	258, 259
PARKINSON, C.L.	170	PELICAN, P.	148	PETERSON, W.K.	217
PARKS, G.	212, 217, 220	PELINOVSKY, E.	167, 168, 263, 267, 268	PETFORD, N.	76, 108
PARKS, G.K.	212, 220	PELLERIN, S.	232, 261	PETIT, C.	77, 78
PARKS, G.K.	220	PELLETIER, A.	115	PETIT, J.-P.	74, 113
PARMIGIANI, F.F.	171	PELLETIER, B.	69	PETIT, J.R.	189, 198
PARODI, P.	199	PELLETIER, J.D.	74, 75, 97, 104, 143	PETKOVSKI, R.	279
PAROL, F.	184, 192		190, 193, 252, 253, 255	PETOUKHOV, V.	256
PAROLAI, S.	82	PELLINEN, R.J.	220	PETRACHENKO, W.T.	135
PARONIS, D.	280	PELLIS, G.	65, 86	PETRAKIS, M.	280
PARPHENUK, O.I.	80	PELON, J.	174, 184	PETRAZZUOLI, S.M.	94, 95
PARRA, M.	198	PELOSINI, R.	203	PETRENKO, B.Z.	253
PARRAVICINI, G.	140, 141	PELOUSO, F.	93, 94	PETRILLO, Z.	114
PARROT, M.	212, 221, 273	PEN, G.	128	PETRINI, K.	80
PARSEGOV, D.V.	108	PENAZZI, G.	280	PETRONIO, L.	86
PARTZSCH, J.H.	81	PENGE, J.	76	PETRONOTIS, K.	72
PASCAL, B.	259	PENKETT, S.	232, 262	PETROPOULOS, B.	191
PASCAL, C.	74	PENKETT, S.A.	177, 194, 195, 197	PETROSINO, S.	88, 92, 278
PASCAL, G.	86	PENNA, N.T.	123, 134	PETROSINO, S.	88, 278
PASCUAL, A.	171	PENNISI, M.	95	PETROSYAN, A.	173, 174, 238
PASQUALE, V.	68	PEPE, M.	279	PETROV, L.	135
PASQUERO, C.	204	PEPLER, S.J.	261	PETROV, S.	132
PASSCHIER, C.W.	99	PERBOS, J.	200	PETROV, S.D.	132
PASSIER, H.F.	215	PERCHUC, E.	83, 84, 87	PETROV, V.	221
PASSOT, T.	86, 89	PEREGO, S.	228	PETROV, V.M.	211, 218
PATANE, D.	114, 272	PEREIRA DOS SANTOS, L.	157	PETROVA, G.N.	65
PATELLA, D.	199	PEREIRA, D.	94	PETROVA, N.	77, 78, 245
PATES, J.M.	250	PEREIRA, M.G.	191	PETROVSKY, E.	96, 97, 101
PATHFINDER SCIENCE TEAM	119	PEREJASLOVA, N.	207	PETRUKOVICH, A.	217, 221
PATRIAT, P.	119	PERELADOV, M.	75	PETRUKOVICH, A.A.	211, 221
PATRIAT, PH.	109	PEREPELOV, A.B.	92	PETRUKOVITCH, A.	221
PATRIER, P.	234, 235	PERES, G.	213, 214, 224	PETRY, H.	233
PATTON, R.	224, 242	PERESAN, A.	256	PETSCHHEL-HELD, G.	257
PATZOLD, M.	243, 247	PEREZ GARCIA, V.	103	PETTENGILL, G.H.	249
PAUBERT, G.	64	PEREZ GOMEZ, B.	200	PETTI, M.	263, 267
PAUCHET, H.	79	PEREZ, A.	164, 165	PETZOLD, A.	233, 280
PAUL, A.	274	PEREZ, B.	159	PEUCH, V.-H.	208
PAULA, A.	221	PEREZ, L.	110	PEUGEOT, C.	153, 157
PAULARENA, K.I.	118	PEREZ, M.A.	187, 188	PEVZNER, L.	78, 79
PAULL, C.K.	69, 83	PEREZ, O.J.	271	PEYMIRAT, C.	211
PAULSEN, H.	125, 126	PEREZ-ESTAUN, A.	83, 86, 87	PEYRAT, S.	88
PAULUHN, A.	140	PEREZ-GONZALEZ, A.	160	PEYRON, O.	189, 190
PAUVELS, H.	183	PEREZ-GUSSINYE, M.	116	PEYVE, A.A.	117
PAVAN, V.	97	PEREZ-PASTOR, R.	187, 188	PEZARD, P.A.	78, 110, 112, 117
PAVLENICHVILI, E.	87	PEREZ-PERAZA, J.	218	PEZZUTO, S.	248
PAVLENKOVA, N.	82, 124, 128, 129,	PERFETTINI, H.	89	PFAFF, R.	217
PAVLIS, E.C.	134, 135, 272	PERGALANI, F.	275	PFAFF, R.F.	67
	124, 130, 131	PERIN, B.	134	PFEIFFER, A.	143
PAVLIS, N.K.	210	PERINI, J.P.	104	PFEIFFER, P.	197
PAVLOV, A.F.	209-211, 218	PERIS, G.	178, 199	PFEILSTICKER, K.	184, 185, 195
PAVLOV, A.V.	174	PERISSORATIS, C.	267		227, 230
PAVLOV, S.	263, 266	PERKINS, R.J.	262	PFIFFNER, A.	80, 81
PAVLOV, V.	266	PERKINS, S.P.	152	PFIFFNER, O.A.	79
PAVLOV, V.I.	192	PERLT, J.	126, 128	PFISTER, G.	226
PAWLOWSKA, H.	227	PERLWITZ, J.	164, 165	PHAM, D.T.	202
PAWSON, S.	193, 207, 208, 230, 232, 262			PHAM, M.	261
PAYAN, S.				PHAM-DIN-TUAN	201

PHAN, T.	220	PITERS, A.J.M.	226	PORCU, F.	179
PHARAOH, T.	83, 84	PITONAK, P.	85	POREL, G.	158
PHERSSON, M.	175	PITRAT, D.	167	PORFIDO, S.	275
PHILIPONA, R.	176, 177, 228	PLAG, H.-P.	128, 129	POROSHINA, I.	115, 117
PHILIPP, A.	190	PLAGENS, H.	187	PORT, G.	100
PHILIPPE, C.	158	PLAKHINA, I.N.	177	PORTENEUVE, J.	226, 227
PHILLIPS, R.J.	249	PLANA, F.	178	PORTER, J.R.	113
PHILLIPS, T.G.	243	PLANCHON, O.	158	PORTH, R.	81
PIACSEK, S.	169, 172, 173	PLANE, J.M.C.	195-197, 211	PORTMANN, R.	193
PIATANESI, A.	267, 268	PLANKE, S.	116	PORTNYAGIN, YU.I.	210, 211
PIBARET, B.	209	PLANTE, A.	203	POSADAS, A.	91
PICARD, S.	179	PLANTEVIN, P.H.	232, 262	POSELOV, V.A.	105, 106
PICARDI, G.	242, 244	PLANTON, S.	177, 181, 193, 201	POSEWANG, J.	118
PICCARDI, G.	171	PLASIENKA, D.	84	POSNER, A.	223
PICCARDI, L.	75, 277	PLASS-DÜLMER, C.	196, 197	POSPELOVA, G.A.	98
PICCININI, D.	89, 90	PLATE, E.	147	POSTMA, D.	151
PICEK, J.	193	PLATT, U.	185, 193-198, 227, 230	POSTYLYAKOV, O.V.	226, 227
PICHERALL, M.	167	PLAUT, G.	203	POT, V.	158
PICHON, A.	169	PLENEFISCH, T.	86, 87	POTAPOV, O.A.	122
PICK, M.	225	PLOMEROVA, J.	70, 87, 88	POTTELETTE, R.	223
PICKART, R.S.	165, 168	PLOTKIN, V.V.	86, 210	POTYLITSIN, P.G.	266
PICON, P.	199	PLUMB, R.A.	230, 266	POULARD, C.	157
PICORNELL, M.A.	179	PLUSHYEV, V.A.	155	POULET, D.	177
PICOT, N.	219	PLYASOVA BAKOUNINA, T.A.	215	POULET, G.	194
PICSKAY, Z.	84	PNRH TEAMS	157	POULIQUEN, G.	119
PIEGAY, H.	156, 160	POCCARD, I.	176, 188	POUPINET, G.	80
PIEHLER, H.	148	POCOVI-JUAN, A.	102	POUPINET, X.	88
PIEL, A.	208, 209	PODEWSKI, S.	168	POUPONNEAU, B.	180, 181
PIERDICCIA, N.	102	PODLADCHIKOV, Y.	77, 79, 80, 85	POUQUET, A.	215
PIERI, M.	145	PODLADCHIKOV, YU.YU.	263	POUROVSKYI, L.V.	147
PIERINI, S.	166, 172	POESEN, J.	160	POUTANEN, M.	133, 134
PIERRE, C.	118	POGGI, P.	90	POUYAUD, B.	157
PIERSANTI, A.	75, 104	POGGIO, L.	175	POWELL, K.G.	211, 213, 240
PIETERS, C.	244	POGOSSIAN, A.	273	POZHARSKI, E.V.	120, 121
PIETRZAK, J.	169	POHJA, T.	192	POZZI, J.-P.	158
PIGEONNEAU, F.	234	POHL, M.	87	POZZI, J.P.	79, 100, 112
PILAN, L.	146	POHL, M.M.	86	PRADELLE, F.	177
PILCHER, C.	237	POHL, W.	148	PRANGE, R.	240, 241
PILEGAARD, K.	176	POIDRAS, T.	99	PRASAD, S.N.	143
PILLET, R.	69	POINTEAU, I.	109	PRASAD, S.S.	208, 233
PILLING, C.	144	POISSON, A.	163	PRATESI, G.	110
PILLING, M.J.	196, 197	POISSON, N.	205, 206, 225	PRATICELLI, N.	114
PILLINGER, C.T.	244	POKHIL'KO, S.N.	210	PRATT, G.	234
PILOZZI, A.	189	POKHOTELOV, O.	273	PRATX, B.	157
PINA ALMEIDA, E.	113	POLANSKEY, C.	240	PRECH, L.	221, 222
PINAR, A.	64, 89	POLCHER, J.	144, 146, 188, 192, 193	PREECE, R.	190
PINAR, R.	105, 106	POLET, J.	87	PREISS, S.	112
PINARDI, N.	124, 129, 168, 172, 173, 198, 259, 260	POLETTI, G.	224	PRELLER, R.	201
PINAULT, J.-L.	140	POLIAKOV, A.	71, 74, 82	PRELOGOVIC, E.	86
PINCUS, R.	192	POLIAKOV, A.N.B.	68	PRESCOTT, W.	134
PINET, P.C.	237, 245	POLITANO, H.	215	PRESSLEY, R.A.	94
PINGUE, F.	92-94, 277	POLKKO, J.	239	PRESTININZI, A.	276
PINNOCK, M.	217	POLOM, U.	83, 84	PRESTON, E.	255
PINOT, S.	189	POLONAISE WORKING GROUP	83, 84	PRESTON, N.	271
PINT, J.M.	172	POLONAISE '97 WORKING GROUP	84	PRESTON, N.J.	270, 271
PINTO, J.G.	164	POLONIA, A.	82, 114	PREUSSE, P.	184, 208
PINTO, V.	105, 106, 276	POLONIO, D.	177	PREVOT, A.	175
PINTON, J.-F.	253, 254	POLVANI, L.	266	PREVOT, L.	157
PINTY, J.-P.	185	POLYAKOV, S.V.	216	PREVOT, M.	96-99
PIO, C.	187	POLZIN, K.L.	161	PRIAMIKOV, S.	169
PIO, C.A.	199	PONATER, M.	230, 233	PRIBNOW, D.	109, 110
PIOCK-ELLENA, U.	154	PONCE-ALVAREZ, M.T.	156	PRICE SCIENCE TEAM	196
PIOMBO, A.	74	PONCHAUT, F.	128	PRICE, C.	256
PIPER, D.J.W.	92, 120	PONCIN, CH.	181, 183	PRICE, E.	128
PIRASZEWSKI, M.	136, 137	PONDRELLI, S.	65	PRICE, J.C.W.	258
PIRAZZOLI, P.A.	122, 123, 129, 173, 191	PONGRACZ, R.	191	PRICE, N.B.	198, 199
PIRES, C.	204	PONT, V.	186	PRIEBE, M.	200
PIRINGER, M.	280	PONTE, M.	270, 271	PRIEST, E.R.	223
PIRIOU, C.	180	PONTE, R.	132	PRIEUR, D.	115
PIRKER, O.	155	PONTE, R.M.	125, 132	PRIGANCOVA, A.	191
PIRO, O.	259	PONTIER, R.	264	PRILEPIN, M.	81
PIRO, S.	102	PONZIANI, F.	89	PRIMAVERA, L.	215
PIRRE, M.	227	PONZINI, G.	140, 141	PRIMICERI, R.	105
PIRRONELLO, V.	243, 244	POOR, A.	209	PRITCHARD, M.	78
PISACANE, G.	179, 201	POPA, M.	64, 77, 91, 92	PRIVITERA, E.	82, 92, 278
PISCERCHIA, P.-F.	86	POPE, V.D.	232	PROCHAZKA, I.	135
PISCINI, A.	268	POPECKI, M.A.	214, 223	PROCHNOW, D.	143
PISCITELLI, S.	252, 272	POPEL, S.I.	216, 240	PROCKTER, L.	237
PISCITELLO, M.	102	POPELAR, J.	135	PROCKTER, L.M.	117, 238
PISERCHIA, P.-F.	67	POPESCU, D.	220, 221	PROCTOR, F.H.	234
PISKAREV, A.L.	105, 106	POPESKOV, D.	106	PROCTOR, R.	129, 167, 200
PISNICHENKO, I.A.	191	POPIELAWSKA, B.	216	PRODEHL, C.	63, 77, 78, 80, 83
PISSARENKO, N.	221	POPOV, A.M.	77, 78	PRODI, F.	178, 179, 184
PISSARENKO, N.F.	221, 222	POPP, T.	110, 111	PROFETI, G.	279
PITALENKO, E.I.	112	POPPE, D.	197, 198	PROKHORENKO, V.I.	220, 222
		POPRAWA, P.	73	PROKOPIEV, U.	244

PRÖLSS, G.W.	218	RADULIAN, M.	77, 91, 92, 271	RAZAKARISOA, O.	158
PROTAT, A.	180	RADWAN, A.H.A.	103	RAZINKOV, O.G.	209
PROVAN, G.	217	RAGETTE, G.	155	RAZORENOVA, O.A.	191
PROVENZALE, A.	248, 256, 258, 259	RAGNARSSON, S.	78	RDAME, C.	199
	265, 266	RAGO, V.	172, 173	RE, E.	244
PROVENZANO, G.	159	RAHMSTORF, S.	161, 164, 165	READ, P.L.	203, 238, 239, 256
PROVOST, A.	94, 111	RAHNER, S.	200	READMAN, P.W.	105, 106, 115
PRUNER, P.	102	RAILLARD, O.	167	REALE, F.	213
PRYOR, S.	176	RAILLARD, S.	76	REALE, O.	178, 268
PRYSE, S.E.	210	RAIMBAULT, G.	153	REBERAC, F.	223
PRZYBYLSKA, G.	229	RAIMBAULT, P.	199	REBESCO, M.	65, 90
PTAK, T.	149	RAIROUX, P.	204, 205	REBEZ, A.	65
PUCHER, R.	104	RAISSOUNI, N.	107	REBMANN, C.	177
PUCHKOV, V.	83	RAJEWSKA-WIECH, B.	228	REBSCHER, D.	278
PUDOVKIN, M.I.	212, 214, 216	RAKHMATULIN, R.A.	212	RECHOU, A.	208
PUECH, C.	159, 269	RAKHMATULLIN, R.	101	REDAELLI, G.	228
PUEYO-MORER, E.L.	102	RAKOTOMALALA, N.	158	REDAELLI, S.	215
PUGA, E.	68	RAM BABU, H.V.	107	REDDING, B.	250
PUGALOVA, S.S.	260	RAMACHER, B.	194	REDDMANN, TH.	208
PUGLIESE CARRATELLI, E.	267	RAMALHETE, D.	88	REDELSPERGER, J.L.	188
PUGLISI, C.	122	RAMASCO, M.	270	REDONDO, J.M.	257-259, 264
PUGNAGHI, S.	146	RAMBAL, S.	159, 160	REED, D.N.	203
PUIG, C.	73	RAMEL, C.	134	REED, P.L.	239
PUIG, P.	167, 168	RAMIREDDYGARI, S.R.	152	REEDER, S.	112
PUIGDEFABREGAS, J.	167, 168	RAMIREZ, C.	263	REEH, G.A.	105, 106
PUJADES, L.	91, 103	RAMIREZ, J.	140, 162	REEMST, P.	74
PUJADES, L.G.	276, 277	RAMIREZ, M.	77	REES, A.	216
PULAKOS, C.	191	RAMIS, C.	179, 268	REES, D.	210
PULGAR, J.A.	86	RAMOREZ, J.J.	163, 167	REES, F.	235
PULINETS, S.A.	219, 273	RAMOS, D.	277	REES, J.M.	257, 258
PULKINEN, T.I.	220	RAMRATH, A.	97, 98	REESE, A.	186, 196
PULKKINEN, T.I.	217	RAMSAUER, J.	129	REEVES, G.	223
PUMPANEN, J.	176	RAMSAY, F.J.	258	REEVES, G.D.	212, 217
PUNONGBAYAN, R.S.	94	RAMSTEIN, G.	189	REFAIT, PH.	151
PURUCKER, M.	105	RANA, G.	144, 177	REGENAUER-LIEB, K.	63, 70
PURVANCE, D.T.	141	RANDALL, D.A.	188, 192	REGLI, CH.	140
PUSHKIN, V.F.	219	RANDEL, W.J.	208	REGNIER, M.	69
PUTZ, E.	226, 280	RANDEU, W.L.	184	REGNIER, P.	148
PUTZKA, A.	161, 162	RANERO, C.	114, 115	REHAULT, J.P.	79, 116, 120
PYCHA, J.	218	RANERO, C.R.	115-118	REIANO, D.	278
PYKHOV, N.N.	167	RANGA RAJU, K.G.	146	REICHARDT, J.	185
PYLE, J.	197	RANKINEN, K.	146	REICHENBACH, P.	279
PYLE, J.A.	195, 232, 262	RANNIK, Ü.	176, 192	REICHERT, B.	149
PYRAK-NOLTE, L.J.	108	RANNOU, P.	239	REICHERT, B.K.	189
PYSKLYWEC, R.N.	73	RAO, M.P.	174, 261	REICHERT, C.	115, 117
PYTHAROU LIS, I.	178, 188	RAOULT, A.	243	REICHERT, K.	200, 201
QI, L.	128	RAPOLLA, A.	105	REICHERT, L.	196, 197
QIAN, B.	128, 144, 170, 190	RAPPENGLÜCK, B.	187, 188, 230	REICHERT, P.	141
QIN, C.Y.	271	RAPPENGLUECK, B.	197, 198	REID, I.D.	116
QIU QI-XIAN	122	RAPTAKIS, D.	277	REID, R.J.	250
QUADFASSEL, D.	161, 166, 167, 170	RASCHKE, E.	184, 205, 206	REIGBER, CH.	81, 126-129, 134
QUADRELLI, R.	191	RASH, J.P.S.	217	REILINGER, R.	81
QUADRI, C.	179	RASINKANGAS, R.	212	REIMANN, S.	197, 198
QUANTE, M.	175, 184	RASMUSSEN, A.	177	REINER, A.	204, 205
QUARANTA, G.	158, 159	RASMUSSEN, E.	169	REINER, M.J.	213
QUARTA, T.	103, 105	RASMUSSEN, E.B.	169	REINER, T.	196, 197
QUARTERONI, A.	91	RASMUSSEN, J.J.	265	REINHARD, M.	150
QUEGAN, S.	155	RASMUSSEN, O.	107	REINHART, E.	136
QUEINNEC, J.	241, 242	RASO QUINTANA, J.	270	REINISCH, B.W.	219
QUELOZ, D.	248	RASPOPOV, O.M.	65, 189, 228	REISBERG, L.	198
QUEMAERAIS, E.	214	RATAJ, M.	245	REISNER, G.I.	77
QUEMENEUR, F.	115	RATKIEWICZ, R.	215	REKOLAINEN, S.	141
QUEMERAIS, E.	213, 214, 242	RATMEYER, V.	163	RELLE, M.	118
QUEROL, X.	178	RATSIMANDRESY, A.	163	RELLE, M.K.	118
QUETIN, P.	141	RATSIMANDRESY, A.W.	167	REME, H.	220, 236, 240
QUILFEN, Y.	182	RATSIVALAKA, C.	169	REMY, F.	126, 127
QUINN, P.	152, 155	RATTE, J.-P.	160	RENARD, F.	141
QUINN, R.	238	RATTO, C.F.	178	RENARD, J.B.	227, 243, 244
QUINTANILLA, J.	158	RAUBER, M.	140	RENARD, J.C.	241
QUINTARD, M.	157, 158	RAUCH, J.L.	211, 220, 221	RENARD, P.	139
QUINTERO, R.	82	RAUCH, J.L.	221	RENAUD, A.	228
QUIRICO, E.	243, 247	RAUDSEPP, U.	168	RENAUD, X.	79
QUISEFIT, J.P.;	280	RAUER, H.	243, 247, 248	RENAULT, P.	140
RAAB, S.	111	RAULIN, F.	244	RENAUX, B.	158
RAABE, A.	174, 175, 185, 203	RAUPACH, M.R.	176	RENFREW, I.	180
RABAE, A.M.	106	RAVA, M.	270	RENFREW, I.A.	181
RABBEL, W.	83-87, 103	RAVEGNANI, F.	261	RENGER, W.	228
RABITTI, S.	199	RAVETTA, F.	180, 231	RENNENBERG, H.	230
RACCA, G.D.	245	RAVILLY, M.	119	RENNER, E.	177, 229
RACLOT, D.	269	RAVILOVA, N.	101	RENOUARD, D.	166, 263
RADAKOVITCH, O.	199	RAYEZ, M.-T.	194, 195	RENSCHLER, C.	146
RADHAKRISHNA, I.	110	RAYMOND, C.A.	71, 128	RENSSEN, H.	189
RADICELLA, S.M.	219, 220	RAYMOND, J.C.	225	RENTSCH, M.	124, 125, 130
RADICS, K.	197, 198	RAYNAUD, S.	109, 191	REPINA, I.A.	181, 182
RADULAIA, M.	64	RAYNER, N.A.	190	REPPIN, J.	163
RADULESCU, F.	136	RAZACK, M.	158	REPUSSEAU, PH.	79

RESHEF, M.	118	RIOU, C.	151, 157	ROHRMEIER, M.	140
RESHETNYAK, M.	96, 97	RIPEPE, M.	89, 90	ROIG, A.	157
RESTA, F.	94	RIPPETH, T.	167	ROIG, J.Y.	79, 80
RESTON, T.J.	115, 116	RISSMANN, J.	178	ROJAS, J.F.	239
RETALIS, D.	176	RITCHIE, H.	203	ROJAS, J.L.	125, 130
REUTER, A.	184	RITTER, O.	113, 114	ROKHINSON, E.E.	156
REVA, YU.A.	129	RITTER, P.	114	ROKITYANSKY, I.I.	83, 112-114, 120, 121, 253
REVEL, M.	198	RITTER, S.	105	ROLINSKI, S.	169
REVERDIN, G.	164-166, 181	RIUS, A.	129, 219	ROLLASON, R.M.	211
REVIL, A.	110, 112	RIVAS, R.	142	ROLLET, N.	79, 115
REVVA, V.N.	112	RIVERA, A.	111	ROMAGNOLI, C.	122, 268
REX, M.	227	RIVERA, L.	64, 91	ROMAIRON, A.	268, 270
REY, V.	167	RIVERO, L.	105, 106, 276	ROMANELLI, F.	89
REYNAUD, T.	162	RIVES, T.	113	ROMANI, P.N.	247
REYRE, Y.	98	RIVIN, I.	193	ROMANO, C.	95
REYSS, J.-L.	198	RIXEN, M.	166	ROMANOU, A.	168
REYSS, J.L.	117	RIYALTA, E.	95	ROMANOV, S.	217, 220-222
REZEAU, L.	223	RIZI, V.	228	ROMANOV, S.A.	220-222
REZHENOV, B.V.	212	RIZZO, R.	185, 186	ROMANOV, V.	220, 221
REZNIK, G.M.	263	RIZZO, V.	255	ROMANOVA, N.N.	264
RHEIN, M.	162, 169, 172, 173	ROADS, J.	181	ROMANTSOVA, T.	221
RHOADES, D.A.	272	ROALD, L.A.	154	ROMANTSOVA, T.V.	221
RHODES, R.	201	ROBAK, H.	76	ROMANYUK, T.V.	66, 67, 70
RHODES, R.C.	202	ROBERT, C.	227	ROMASCHENKO, M.I.	155
RIBEIRO, A.	80	ROBERTI, L.	178	ROMASHETS, E.P.	213
RIBEIRO, I.	122	ROBERTS, A.P.	98, 99	ROMEO, R.	275, 276
RICARD, J.L.	183, 192	ROBERTS, D.	237	ROMERO, M.	115, 116
RICARD, L.P.	95	ROBERTS, G.	144	ROMERO, R.	179, 268
RICARD, Y.	69, 72, 80, 245, 262, 263	ROBERTS, M.J.	166	RÖMKENS, M.J.M.	143
RICAUD, P.H.	209, 228	ROBERTS, N.	180	ROMMEVAUX-JESTIN, C.	119
RICCARDI, U.	276	ROBERTS, N.M.	180	ROMOLI, M.	213
RICCIARDULLI, L.	208	ROBERTS, R.G.	91	ROMPOLT, B.	243
RICCO, C.	277, 278	ROBERTSON, D.	71	RON, H.	98, 102
RICHALET, J.	246	ROBINS, R.E.	234, 266	RONCHI, C.	265
RICHARD, P.	158, 234	ROBINSON, T.R.	209	RONCONI, M.L.	276
RICHARD, Y.	176, 188, 191	ROBINSON, W.	132	RONEN, D.	147
RICHARDS, C.J.	256	ROBLE, R.G.	211	RONGO, R.	271
RICHARDS, K.J.	165, 260	ROBOCK, A.	183	RONTU, L.	228
RICHARDS, M.	72	ROCA, A.	276, 277	ROOD, M.J.	229
RICHARDS, M.L.	209	ROCH, M.	232, 261	ROOD, R.	207
RICHARDS, P.G.	218	ROCHA, A.	191	ROOS-SEROTE, M.	239
RICHARDSON, P.	162	ROCHE, C.	158	ROPERCH, P.	82
RICHER, H.	232, 262	ROCHE, R.	268, 278	ROSANOVA, T.	250
RICHET, P.	108	ROCHETTE, P.	96-98, 101, 102	ROSATELLI, G.	278
RICHMOND, A.D.	211	ROCHSTRÖM, J.	155	ROSBJERG, D.	140, 141, 156
RICHNER, H.	175	ROCKEL, B.	185, 192	ROSCA, V.	136
RICHNOW, H.H.	149	RÖCKMANN, T.	209	ROSCOE, H.	226
RICHTER, A.	194, 195	RODGERS, D.	234	ROSE, H.	161
RICHTER, B.	122, 123, 127, 133, 136	RODHE, J.	168	ROSE, TH.	100, 119
RICHTER, S.H.	175	RODICHEV, E.	254	ROSEL, J.	178, 199
RIDAME, C.	199	RODIN, V.	273	ROSEN, J.	228
RIDOU, M.	259	RODNIKOV, A.G.	70, 73	ROSEN, R.D.	132
RIEDEL, M.	267	RODRIGO, J.	140	ROSENBAUER, H.	241, 242
RIEDER, R.	249	RODRIGO, R.	240	ROSENBERG, C.L.	111
RIEDLER, W.	222	RODRIGUES, D.	67, 91	ROSENBERGER, A.	118
RIEMANN, R.	246	RODRIGUEZ DE LEON, A.	163	ROSENBLATT, P.	237
RIEPE, M.	164, 165	RODRIGUEZ REY, A.	108, 109	ROSENBUSH, V.	242
RIEPL, ST.	134	RODRIGUEZ, I.	167	ROSENKRANZ, C.	267
RIERA, M.	172	RODRIGUEZ, J.	160	ROSI, M.	278
RIES, J.B.	159	RODRIGUEZ, L.	108	ROSIER, S.M.	230
RIES, J.C.	124	RODRIGUEZ, L.R.	173	ROSIN, P.L.	278
RIES, J.R.	124	RODRIGUEZ, R.	257	RÖSLER, F.	280
RIETBROCK, A.	82	RODRIGUEZ, T.	179	ROSLOV, YU.	75
RIETVELD, M.	216, 221	RODRIGUEZ-ITURBE, I.	252	ROSOLEN, C.	243
RIETVELD, M.T.	210	RODRIGUEZ-PASCUA, M.	77	ROSS, G.M.	92
RIEUTORD, M.	257	RODRIGUEZ-REY, A.	109	ROSSET, R.	178, 231
RIGAUT, F.	120	RODRIGUEZ-SANTANA, A.	163	ROSSETTI, F.	76
RIGNAULT, E.	111	ROEBBER, P.J.	257	ROSSI, F.	269
RIGO, A.	64, 123	ROECKNER, E.	183, 230	ROSSI, M.J.	195
RIGOL, E.	113	ROED, L.P.	166	ROSSI, P.	142, 151
RIGOLLIER, C.	107	ROELOFS, G.J.	225, 230, 232	ROSSINI, P.	173
RIGUZZI, F.	274	ROESCH, A.	183	ROSSINO, M.	270
RIHM, R.	267	ROESER, H.A.	107	ROSSO, R.	144, 154, 255, 270, 271
RIISAGER, J.	98	ROESSLER, J.	187	ROSU, E.	84
RIISHOJGAARD, L.P.	203, 208	ROETHER, W.	161, 198	ROTA, D.	279
RIJNAARTS, H.H.M.	150	ROETZLER, K.	111	ROTACH, M.	174
RILEY, J.J.	257	ROGASIK, H.	148	ROTACH, M.W.	175
RILLER, U.	80, 111	ROGENHAGEN, J.	115	ROTANOVA, N.M.	106, 107
RIMMELIN, P.	144	ROGISTER, Y.	104	ROTH, I.	223
RINALDI, C.	86	ROGNVALDSSON, S.	75	ROTH, M.	212, 213, 217
RINALDO, A.	252	ROGNVALDSSON, S.TH.	92, 274	ROTHACHER, M.	123, 124, 128, 129, 133
RINCON, P.	77	ROGOWSKI, J.	136, 137	ROTHER, M.	176
RING, U.	80, 81	ROGOWSKI, J.B.	136, 137	ROTT, H.	126, 155
RINGENBACH, J.-C.	76	ROGOZHIN, E.V.	272	ROTT, M.	244
RINKE, A.	256	ROHARDT, G.	171	ROTTGER, J.	210
RINNE, J.	187	ROHRER, F.	197, 198		

ROTUNDI, A.	244, 247	RUNDLE, J.B.	70, 94, 255	SALLES, M.A.	182
ROTWAIN, I.M.	256	RUNOV, A.V.	212, 214	SALSTEIN, D.A.	131-133
ROUAN, D.	248	RUOTOISTENMAKI, T.	105, 106	SALTELLI, A.	176
ROUCHY, J.M.	118	RUPOLO, V.	172, 173	SALUSTI, E.	93, 172, 173, 258, 266
ROUCOU, P.	191	RUPPERT, L.	187	SALVADOR, R.	178
ROUJEAN, J.-L.	176	RUPRECHT, E.	164, 165	SALVANY, C.	148, 152
ROUJEAN, J.L.	157	RUS, T.	136, 137	SALVI, S.	89
ROULIER, S.	158	RUSANOV, A.	221	SALVINI, F.	93
ROUQUETTE, S.	220	RUSINIAK, L.	109, 110	SALVIO, L.	237
ROURE, F.	73	RUSS, N.	251	SAMARDJIEVA, E.	64
ROUSE, P.J.	95	RUSSELL, C.T.	211, 216, 217, 220, 221	SAMMARTINO, S.	109
ROUSH, T.	247	RUSSELL, S.M.	116	SAMMONDS, P.R.	112
ROUSSEAU, D.D.	190	RUSTENBACH, J.	221	SAMSONOV, A.A.	212
ROUSSEAU, V.	118	RÜSTER, R.	207	SAMUELSON, R.E.	247
ROUSSET, D.	90, 91	RUTI, P.M.	179, 201	SAMUELSSON, J.	74
ROUVIER, H.	102	RUTIGLIANO, P.	72	SANAK, J.	187
ROUWHORST, W.F.J.A.	234	RUTLEDGE, D.R.	135	SANCHEZ SESMA, F.J.	91
ROUX, A.	221, 241, 242	RUTTER, E.	109, 110	SANCHEZ, F.J.	277
ROUX, F.	180	RYABCHENKO, V.A.	260	SANCHEZ, J.	168, 276
ROUX, S.	254	RYAN, J.W.	135	SANCHEZ, J.L.	234, 235
ROVELLI, A.	90, 277	RYBACH, L.	110	SANCHEZ, M.A.	259, 264
ROVIRA, A.	143	RYBALKA, A.	78, 79	SANCHEZ-ARCILLA, A.	167
ROWAN, J.S.	155	RYBAO, J.	271	SANCHEZ-DIEZMA, R.	145, 160
ROWE, C.	135	RYBERG, T.	87	SANCHEZ-PEREZ, J.M.	157, 158
ROWE, J.	113	RYBICKI, K.R.	89	SANCHEZ-VILA, X.	140
ROWELL, D.P.	165, 191	RYCROFT, M.J.	211, 212, 215, 216	SANDAHL, I.	211, 212, 217, 220, 221
ROWLANDS, G.	222	RYKUNOV, L.N.	265	SANDER, J.	162
ROWLEY, D.M.	196	RYLOV, A.	265	SANDER, R.	186, 195
ROY-BARMAN, M.	163	RYMER, H.	122	SANDERS, C.A.E.	81
ROYER, J.-F.	191-193	RYZHIKOV, G.A.	90	SANDERSON, D.J.	113
ROYER, J.-Y.	82	RYZHYI, B.P.	106	SANDERSON, T.R.	214
ROYER, J.J.	79, 110	RZADKIEWICZ, S.	267	SANDHOLT, P.E.	217
ROYER, L.	86	SABADELL, F.J.	91	SANDO, A.B.	172, 173
ROZANES, P.	124	SABADELL, J.F.	91	SANDOVAL, S.	116
ROZANOV, E.	226, 227, 232, 233, 262	SABADINI, R.	63, 64, 68, 70-72, 75, 104, 127	SANDRONI, V.	198, 199
ROZANOV, E.V.	186	SABATES, A.	168	SANDWELL, D.	128
ROZANOV, V.	226, 227	SABATIER, P.C.	267	SANFORD, T.B.	126
ROZAVOV, E.	226, 227	SABATINI, D.	150	SANGRA, P.	162, 163, 167
ROZEN, D.	195	SABATINI, D.A.	149	SANIDA, G.	187
ROZIN, U.	160	SABETIAN, A.	115	SANINA, I.A.	87
ROZUMENKO, V.T.	210	SABININ, K.D.	263	SANKOV, V.	78
ROZWADOWSKA, A.	181, 182	SABLOTNY, R.	249	SANNA, A.	178
RUA, A.	164, 165, 178, 179, 189, 229, 234, 235, 267, 269	SABLOTNY, R.M.	249, 250	SANNA, G.	131
RUBBIA RINALDI, G.	279	SACCHETTI, D.	268	SANNINO, G.	172, 173
RUBIN, D.M.	143	SACCHI, M.	74	SANSOSTI, E.	89
RUBINKIEWICZ, J.	85	SACCOROTTI, G.	88, 92, 93, 278	SANTACROCE, R.	95
RUBINO, A.	166-168, 172	SACHPAZI, M.	115, 278	SANTAGUIDA, R.	179
RUCINSKI, D.	213, 214	SADOURNY, R.	183	SANTANA, R.	163
RUCKER, H.O.	243	SADOUX, S.	166	SANTANGELO, R.	146
RUDAKOV, V.V.	228	SADYKOV, D.	71, 153, 154, 272	SANTARATO, G.	142
RUDANT, J.-P.	123	SAELTHUN, N.-R.	154	SANTASECARIA, V.	261
RUDDICK, K.G.	167	SAENGER, N.	142, 156	SANTIAGO-MANDUJANO, F.	163
RUDELS, B.	170	SAENKO, O.A.	168	SANTOLERI, R.	172
RUDELS, R.	170	SAFANDA, J.	65, 66, 73, 109, 110	SANTOLIK, O.	212, 221, 222
RUDENKO, V.N.	120	SAFARICZ, M.	76	SANTOS, M.J.	144
RUDIS, R.	234	SAFRANKOVA, J.	217, 220-222	SANTURETTE, P.	180
RUDOLPH, J.	194	SAFRANKOWA, J.	222	SANZ, J.	218, 219
RUDY, R.J.	210	SAFRONOV, V.S.	248	SANZ, J.M.	178
RUEDA, M.-J.	163	SAGAR, P.	252	SANZ, M.J.	187, 188, 229
RUEDA, M.J.	163	SAGNOTTI, L.	64, 99, 101	SANZA, G.	178, 199
RUEGG, J.-C.	81	SAHUQUILLO, A.	140, 156, 160	SAPARIN, P.I.	256
RUEGG, J.C.	123	SAI, O.	156	SARA, S.A.	280
RUELLAN, E.	115	SAIC, S.	96, 97	SARACCO, G.	90
RUSS, D.	136	SAID, F.	176	SARAO, A.	75, 89, 91
RUETTENER, E.	272	SAID, M.A.	149	SARDESHMUKH, P.	132
RUF, P.	129	SAIERS, J.E.	140	SARDIN, M.	149
RUFFET, G.	63	SAILHAC, P.	106	SARDINI, P.	109
RUFFINI, G.	219	SAILLANT, S.	220	SARDOU, O.	115
RÜGGE, K.	149	SAITO, M.	103	SARI, C.	119
RUHE, C.	145	SAITO, S.	215	SARIFFENA, D.	125, 126
RUHNKE, R.	208	SAKAI, A.	118	SARKISYAN, A.S.	162, 168
RUISI, R.	280	SAKAI, K.	189	SARMA, V.V.S.S.	199
RUIZ DE ARGANDO, V.G.	109	SAKELARIOU, N.	229	SARNTHEIN, M.	98
RUIZ DE ELVIRA, A.	167	SAKR, K.O.	103	SARRIS, E.T.	220
RUIZ, A.	203	SALA, M.	160	SARSITO, D.A.	123
RUIZ, J.M.	153, 154, 160, 269, 279	SALAMA, A.	247, 248	SARTORI, R.	87
RUIZ, S.	166, 167	SALAS Y MELIA, D.	169, 171	SARY, C.	74
RUIZ-PINO, D.	163	SALAS, J.	167, 168, 259	SAS-UHRYNOWSKI, A.	106, 107
RUIZDEELVIRA, A.	255	SALAT, J.	166, 168	SASANO, Y.	227
RUKHOVETS, L.	203	SALEM, C.	215, 222	SASOROVA, E.V.	273
RULLI, M.C.	270, 271	SALGOT, M.	155	SASS, J.	109, 110
RUMMEL, R.	127	SALIN, D.	158	SATOH, T.	85
RÜMPKER, G.	87	SALKINOJA-SALONEN, M.	176	SATORRE, M.A.	243
RUMPLER, D.	96, 97	SALLARES, V.	116	SAUCK, W.	150
RUMYANTSEV, V.	154	SALLES, C.	160	SAUER, K.	213, 222, 240, 241
				SAULI, P.	209, 218

SAULNIER, G.M.	157, 158	SCHLAGER, W.	196, 197	SCHUEPBACH, E.	177, 231
SAULT, R.J.	241	SCHLEGEL, K.	209-211, 217, 218, 223	SCHUEPP, P.H.	175
SAUSEN, R.	230-233	SCHLESIER, A.C.	218	SCHUH, G.	187
SAUSSE, J.	109	SCHLESINGER, M.	226, 227, 232, 233, 262	SCHUH, H.	133, 135
SAUTE, M.	185	SCHLICKER, O.	150	SCHUHLE, U.	213
SAUTER, E.A.	107	SCHLÖNZ, B.	120	SCHUHMACHER, P.	150
SAUTER, M.	139	SCHLÖNZEN, K.H.	177, 178	SCHULIN, R.	147
SAUVAUD, J.	207, 220-222, 236	SCHLÜSSEL, P.	182	SCHULTE, P.	233
SAUVAUD, J.-A.	207, 220-222	SCHLÜTER, W.	134-136	SCHULTZ, K.	129
SAUVAUD, J.A.	207, 220-222	SCHMALZL, J.	263	SCHULZ, B.	247
SAUVAUD, J.A.	220-222, 240	SCHMEITS, M.J.	165	SCHULZ, G.	107
SAVENIJE, H.H.G.	153	SCHMELING, H.	68, 70	SCHULZ, J.	146, 182
SAVI, F.	141, 147	SCHMID, H.P.	174-176	SCHULZ, J.-P.	146
SAVIÄRVI, H.	239	SCHMID, S.M.	81	SCHULZ-SCHÖLLHAMMER, K.	231
SAVIN, S.	217, 220-222	SCHMIDLIN, F.J.	193	SCHULZE, A.	80, 83
SAVIN, S.P.	221	SCHMIDT, A.	102, 103	SCHULZE, E.-D.	177
SAVITSKAYA, S.	208	SCHMIDT, E.	115	SCHULZE, K.C.	110
SAVOYE, B.	120, 267	SCHMIDT, G.	207	SCHUMANN, U.	232, 233
SAWYER, D.	116	SCHMIDT, H.	178	SCHÜRCH, M.	141
SAWYER, W.	94, 111	SCHMIDT, J.	87	SCHUSTER, K.	80, 83
SAXENA, R.K.	146	SCHMIDT, M.	125, 126	SCHUSTER, P.	237
SAYED, M.	170	SCHMIDT, N.	200	SCHUSTER, S.	169
SAZONOV, I.	263	SCHMIDT, P.W.	96	SCHÜTH, C.	150
SAZONOV, I.A.	265	SCHMIDT, S.	66, 67, 198	SCHUTZ, B.E.	128
SBRANA, A.	94, 95, 278	SCHMIDT, T.	165	SCHWAAB, G.	209
SCAIFE, A.A.	208	SCHMIDT, W.	213, 214, 242	SCHWAB, A.P.	150
SCALELLA, G.	275	SCHMIEDER, B.	223, 225	SCHWAHN, W.	122
SCALSKY, A.	220, 221	SCHMIEDL, G.	199	SCHWARTZ, B.E.	234
SCALZO, A.	276	SCHMINCKE, H.-U.	267	SCHWARTZ, S.	220
SCANLON, B.R.	147	SCHMINDER, R.	207, 209, 210	SCHWARZ, K.P.	130
SCARASCIA MUGNOZZA, G.	276	SCHMITH, T.	165	SCHWARZ, U.	256, 257
SCARAZZATO, P.	65, 172	SCHMITT, B.	239, 243, 247	SCHWARZ, W.	237
SCARLATO, P.	93	SCHMITT, F.	65, 190, 252-254	SCHWARZE, H.	253
SCARLE, R.	115	SCHMITT, R.	197, 198	SCHWARZENBACH, R.	141
SCARPA, R.	93, 277	SCHMITT, R.W.	161	SCHWARZENBACH, R.P.	151
SCHAAAB, G.	186	SCHMITTBUHL, J.	252	SCHWEGMANN, W.	135
SCHADE, U.	243, 244	SCHMITTNER, A.	161	SCHWEHM, G.	244
SCHAEFFER, J.	249	SCHMITZ, G.	208, 233	SCHWEHM, G.H.	241, 242
SCHAEFFER, P.	127, 130	SCHMITZ-HÜBSCH, H.	131, 132	SCHWEITZER, F.	195
SCHÄFER, A.	73	SCHMUGGE, T.	154	SCHWENN, R.	217, 225
SCHÄFER, G.	141, 142, 158	SCHNABEL, S.	153	SCHWINGENSCHUH, K.	240
SCHÄFER, H.-J.	208	SCHNADT, C.	226	SCIALOM, G.	180
SCHÄFER, J.	196, 197, 204, 205	SCHNEGG, P.-A.	114, 147	SCIARE, J.	204-206
SCHÄFER, U.	105	SCHNEIDER, D.	74	SCIARETTA, C.	72
SCHAFMEISTER, M.-T.	140	SCHNEIDER, H.	248	SCIENTIFIC PARTY OF	
SCHAMING, M.	115	SCHNEIDER, J.	111, 248	ODP LEG 174B	117
SCHANZ, L.	179	SCHNEIDER, M.	135, 147	SCONCIA, B.	192
SCHÄR, C.	155, 165, 179, 190, 265	SCHNEIDER, P.	168	SCOTT, J.	168
SCHARER, U.	116	SCHNEIDER, R.R.	120	SCOTT, J.G.	240
SCHARFMAN, V.S.	92	SCHNEIDERREIT, M.	179	SCOTT, R.B.	125
SCHARMER, G.	236	SCHNEITER, D.	177	SCOTTI, A.	253
SCHARROO, R.	124-126	SCHNELLER, W.J.	210, 218	SCOTTI, O.	75, 274
SCHARTAU, M.	260	SCHNEPP, E.	97, 98, 104	SCOTTO, C.	219
SCHATZMANN, M.	177, 178	SCHNITZLER, K.-G.	176	SEAGER, R.	183
SCHAUER, B.	163	SCHOBER, A.	146	SEAKINS, P.	187
SCHAUER, U.	170	SCHOBER, C.M.	267	SEARLE, R.C.	117
SCHAYES, G.	185	SCHODLOK, M.	171	SEBASTINI, C.	279
SCHECK, M.	73, 74, 76, 83	SCHOEFFLER, B.	79	SEDIFAN SHIPBOARD	
SCHEIBKE, R.	149	SCHOFIELD, J.T.	249, 251	SCIENTIFIC PARTY	120
SCHEID, J.	134	SCHOLER, M.	215, 222	SEDLACEK, M.	196, 197, 205, 206
SCHEINERT, M.	122	SCHOLGER, R.	85, 101, 104	SEDLAZEK, M.	205, 206
SCHEMM, J.-K.E.	192	SCHOLL, D.	118	SEDNEV, I.	184
SCHPEL, M.	153	SCHOLL, D.W.	117, 118	SEDO, M.J.	219
SCHERER, H.	213	SCHOLL, H.	246	SEEBER, G.	94
SCHERER, K.	213, 214, 246	SCHOLTEN, F.	135, 136	SEEFELDNER, M.	227
SCHERLISS, L.	209, 210	SCHÖNEMANN, A.	242	SEEGER, H.	81, 134-136
SCHERNECK, H.-G.	71, 128, 132-134	SCHÖNENBERG, F.	255	SEFARA, J.	85
SCHERTZER, D.	65, 192, 215, 252-255	SCHOTT, B.	70	SEGALL, P.	123
SCHEUCHL, B.	126	SCHOTT, J.J.	107	SEGSCHNEIDER, J.	124, 183, 191
SCHIANO, M.E.	164, 181	SCHRAGE, J.M.	191	SEGURET, M.	111
SCHIDLOWSKI, M.	238	SCHRECKENBERGER, B.	115	SEIBERT, J.	152, 153
SCHIEDEK, T.	149	SCHREIBER, R.	221	SEIBERT, P.	177
SCHILL, E.	96, 97	SCHREIBER, U.	94, 134, 135	SEIDEL, J.L.	95
SCHILLER, C.	230	SCHREINER, B.	238	SEIDEMANN, R.	66, 67
SCHILLER, J.	162	SCHREMS, O.	194, 195, 204-206, 208	SEIDOV, D.	189
SCHILLHORN, T.	115	SCHRIMPF, W.	259	SEIFF, A.	249
SCHILLING, V.	208	SCHRÖDER, F.	233, 280	SEILER, K.-P.	151
SCHINDELE, F.	268	SCHRÖDER, M.	171	SEIN, D.	166
SCHINDER, P.D.	240	SCHRÖDER, W.	177	SEIN, D.V.	168
SCHINDLER, H.	145	SCHROEDER, M.	171	SEISEL, S.	195
SCHINDLER, K.	222	SCHRÖER, A.	240, 241	SEKIDO, M.	135, 136
SCHINDLER, U.	141, 156	SCHRÖTER, J.	201	SELIG, A.	130
SCHIRMER, M.	149	SCHRUM, C.	168, 181, 198	SELLSCHOPP, J.	167, 172, 173
SCHJODT-OSMO, O.	268	SCHUBERT, G.	68, 237	SELTEN, F.	165
SCHLAGER, H.	230, 232, 233	SCHUELLER, L.	192	SELVAGGI, G.	89
				SEMBLAT, J.-F.	277



SEMKOVA, J.V.	211, 218	SHILLING, A.	228	SIMPSON, F.	114
SEMPERE TORRES, D.	145, 160, 270	SHIMAMOTO, T.	112	SIMPSON, J.	167
SEMTNER, A.	171	SHINDELL, D.T.	230	SIMPSON, R.W.	89
SEMTNER, A.J.	171	SHINE, K.P.	230	SIMS, M.R.	244
SENA, F.	147	SHINOHARA, M.	82	SIMUNEK, J.	222
SEND, U.	172, 173	SHIRAIISHI, H.	245	SINCLAIR, A.	135
SENDLHOFFER, G.P.	106	SHIVER, W.	134	SINENKO, L.	133
SENECHAL, G.	90	SHIZGAL, B.D.	238	SINGER, A.	277
SENESE, S.	179	SHLIENOV, A.G.	121	SINGER, H.	212, 220
SENNECHAEAL, N.	164, 165	SHNOLL, S.E.	120, 121	SINGER, W.	207, 210, 231
SENNIKOV, J.	139, 144, 168	SHOLPO, M.E.	113	SINGH, S.	88
SENO MATIAS, M.	122	SHOMALI, Z.-H.	75	SINGH, S.C.	117, 118
SENO, M.L.	88	SHREIBER, I.	264	SINGH, S.K.	75
SENSKE, D.	238	SHREVE, R.L.	143	SINGH, V.K.	97
SENTCHEV, A.	167, 260	SHRIRA, V.	263	SINISCALCHI, A.	114
SEO, K.	277	SHRIRA, V.I.	263, 264	SINNHUBER, B.-M.	227
SEPE, V.	277, 278	SHRIVER, J.F.	202	SIR, M.	65, 66
SERANNE, M.	65	SHTANIN, A.V.	152	SIRANGELO, B.	271
SEREBRYANY, A.N.	168, 263, 267	SHUBINA, M.A.	155	SIROCKO, F.	198
SEREN, S.	103	SHUCKBURGH, E.	232, 261	SIRVEN, J.	164
SERGEEV, B.A.	212	SHUKLA, P.K.	223, 263	SISTLA, G.	230
SERGEEV, V.	221, 222	SHUKOLYUKOV, A.	245	SITNOV, M.I.	216
SERGEEV, V.A.	220	SHUMILIN, YE.N.	149	SITTE, B.	256
SERIANI, G.	91	SHUMILOV, O.I.	65, 189, 228	SIVAN, J.-P.	248
SERIO, C.	252	SHUMILOV, S.	66, 67	SIVCIC, M.	64
SERIO, M.	264, 267	SHUMOVA, N.A.	144	SIZOVA, L.	209
SERMET, R.	147	SHURSHAKOV, V.A.	211, 218	SJÖBERG, L.E.	131
SERNA, A.	173	SHURUBKIN, V.	137, 138	SKAARUP, N.	116
SERON, F.J.	91	SIANI, A.M.	189, 228	SKALSKY, A.	220, 221, 240, 241
SEROVA, V.V.	261	SIBECK, D.	221	SKALSKY, A.A.	220-222
SERRA, N.	161	SIBECK, D.G.	212, 220	SKAR, T.	74
SERRA, R.	150	SICCARDI, F.	145, 158, 254, 255, 268-270, 279	SKARYATIN, V.D.	276
SERRANO, O.	234, 235	SIDHER, S.D.	246	SKAUGEN, T.	268
SERRAVALL, R.	266	SIDI, C.	258	SKEET, D.R.	239
SERRI, G.	63	SIDORENKO, G.	137, 138	SKIBA, Y.N.	259
SERVA, L.	89, 274	SIDOROVA, N.N.	109, 110	SKIRTA, A.YU.	167
SESETYAN, K.	275	SIEBERT, J.	207, 227	SKJELVAN, I.	161, 170
SETARGE, B.	149	SIECKMANN, I.	151	SKLYAROV, V.E.	168, 169, 171
SETTO, I.	106	SIEDLER, G.	163	SKOGSEID, J.	116
SEU, R.	242, 244	SIEGEL, A.	126	SKOLOTNEV, S.	117
SEUFERT, G.	186, 187	SIEGESMUND, S.	87	SKOULIKIDIS, N.TH.	144, 270
SEUNTJENS, P.	146	SIEGMUND, P.	230	SKOURAS, E.	150
SEURONT, L.	253	SIEGRIST, F.	175	SLACZKA, A.	85
SEVEROV, D.N.	162	SIEHL, A.	66, 67	SLADE, M.A.	251
SEVEROVA, V.A.	162	SIGISMONDI, S.	155	SLANCOVA, A.	82
SEXTON, D.M.H.	193	SIGMUNDSSON, F.	123	SLEDZINSKI, J.	136-138
SEYDELL, I.	160	SIGNORELLI, S.	95	SLEEMAN, R.	85, 86
SEZE, G.	184, 192	SIGONA, J.	234	SLEEP, N.	77, 78
SHABALIN, N.	77, 78, 100	SIGSBEE, K.	217	SLEEWAEGER, J.-M.	134
SHABALIN, N.YA.	176, 271	SILLI, T.	239	SLEJKO, D.	65
SHABALOVA, M.V.	190	SIITARI-KAUPPI, M.	108	SLEMR, F.	233
SHAGIMURATOV, I.I.	130, 134, 219	SILANTIEV, S.A.	80	SLEMR, J.	233
SHAH, D.	194, 195	SILBERGLEIT, V.M.	218	SLEPAK, Z.	103, 147
SHALLCROSS, D.	197	SILENY, J.	70, 91	SLIAUPA, S.	73
SHALLCROSS, D.E.	194, 195, 232, 262	SILENZI, S.	122	SLINGO, J.	191, 231
SHAMIR, G.	75, 102	SILIN, I.V.	212	SLINGO, J.M.	188, 190-192
SHANNON, P.M.	83	SILLI, V.	187	SLIVKA, M.	220
SHAPIRA, A.	65	SILVA DIAS, M.A.F.	254	SLOAN, W.	152
SHAPIRO, G.I.	167, 168	SILVA, E.D.	204	SLOAN, W.T.	144
SHAPIRO, M.A.	179, 180	SILVA, P.	267	SLOOTWEG, P.	117
SHAPIRO, N.B.	167	SILVER, P.G.	82, 87	SLUNGA, R.	274
SHAPIRO, S.	110	SILVESTRI, S.	268, 279	SLUNYAEV, A.	263
SHAPIRO, V.	223	SILVESTRIN, P.	129	SMALL, J.	168, 263
SHAPOSHNIKOV, V.E.	243	SIMAKIN, A.G.	95	SMAOUI, H.	260
SHARGORODSKY, V.D.	134, 135	SIMEK, J.	136, 137	SMEDSTAD, O.M.	202
SHARMA, M.	186	SIMEONI, U.	279	SMEKALOVA, T.	103
SHARABIEM, W.M.	229	SIMEONIDIS, P.	187	SMETHURST, M.T.	98
SHARONOVA, Z.V.	98	SIMEONOV, V.	261	SMETS, R.	221, 222
SHAW, D.M.	94	SIMINI, M.	278	SMIDTS, O.F.	141
SHAW, J.	96, 97, 99, 103, 104	SIMMER, C.	184, 185	SMILAUER, J.	209, 218, 219, 222
SHCHEPETKIN, A.	266	SIMMONDS, P.	195	SMILDE, P.	105
SHCHERBININA, T.E.	243	SIMNETT, G.	223	SMILDE, P.L.	105, 106
SHCHUKIN, G.	192	SIMON, J.L.	77	SMILJANIC, N.	105, 106, 112, 114
SHEARER, E.	256	SIMON, L.	151	SMIRNOV, A.P.	120, 121
SHEFFIELD, J.	159	SIMON, P.	208, 226, 233, 262	SMIRNOV, J.	78, 79
SHENG, J.	201, 203	SIMON, P.C.	228	SMIRNOV, N.K.	264
SHEPSON, P.B.	194	SIMON, V.	186	SMIRNOV, V.N.	221, 222
SHEREMET, N.A.	164, 165, 172, 173	SIMON, W.	141	SMIRNOVA, YU.G.	193
SHERETOV, E.	245	SIMONELLI, A.L.	275	SMIT, H.G.J.	231
SHERFETDINOV, L.Z.	156	SIMONNOT, M.O.	149	SMITH, A.	81
SHERRETZ, L.A.	234	SIMONS, F.	69	SMITH, A.L.	95, 278
SHEVELEVA, E.	220	SIMONS, W.	70	SMITH, A.M.	210
SHI, X.B.	166	SIMONS, W.J.F.	123	SMITH, B.	102
SHIAO, C.C.	209	SIMONSEN, K.	162, 170	SMITH, D.E.	134, 237, 249
SHIFRIN, K.S.	182	SIMPKIN, P.	90	SMITH, D.K.	117
SHIIBA, M.	146			SMITH, E.J.	213

SMITH, G.R.	135	SOROKIN, A.E.	254	STANCHITS, S.	108
SMITH, J.A.	200	SORRISO-VALVO, L.	215	STANDISH, E.M.	236, 249
SMITH, J.M.	170	SORRISO-VALVO, M.	270, 271	STANDISH, R.A.	236, 249
SMITH, K.E.	148	SORTINO, F.	94, 95	STANGL, G.	136, 137
SMITH, L.A.	204, 252, 256, 257, 264	SOSPEDRA, J.	168	STANICA, M.	114
SMITH, N.	163	SOTAK, J.	85	STANIFORTH, A.	264
SMITH, P.	249-251	SOTIN, C.	69	STANISAWSKA, I.	219, 220
SMITH, P.H.	239, 249, 250	SOTO, J.I.	70, 120	STANJEK, H.	148
SMITH, P.N.	218	SOUDARIN, L.	124, 128	STANWAY, D.	254
SMITH, S.A.	184	SOUF ELJIL, R.	207	STANWAY, J.D.	192
SMITH, S.E.	239	SOULHAC, L.	262	STAQUET, C.	257-259, 263
SMITH, T.M.	190	SOUPIOS, P.	78, 79	STARK, D.	169
SMITHER, C.	71, 122	SOUPRAYEN, C.	207, 232, 258, 262	STAROSTENKO, V.I.	66, 73, 84
SMRIGLIO, G.	199	SOURIAU, A.	64, 69	STARR, D.	189
SMUSHLYAEV, S.	218	SOUSA OLIVEIRA, C.	276	STASENKO, V.	192
SMYTHE, W.	237	SOUSA, M.L.	276	STASIEWICZ, K.	216, 223
SMYTHE, W.D.	237	SOUVANLASY, V.	234, 235	STAUBES, R.	204, 205
SNEEUW, N.	127, 130	SOUVERMEZOGLOU, E.	169	STAUDACHER, T.	278
SNEGIREV, A.	92	SOUZA, F.A.O.	252	STAUDACHER, TH.	95
SNEZHKIN, E.	265	SOVIC, I.	274	STAUDT, M.	186, 187
SNISHKO, V.D.	112	SPADA, G.	72	STAVENHAGEN, A.U.	115
SNOW, M.	213	SPADARO, D.	214, 223, 224	STAVRAKAKIS, G.	272, 278
SNOW, R.W.	135	SPAHR, T.	246	STCYR, C.	225
SNYDER, C.	179, 181	SPAIN, T.G.	195	STEACY, S.	252
SOARES DE CARVALHO, G.	122	SPAKMAN, W.	63, 64, 66, 67, 69, 70	STEBEL, K.	207, 208
SOARES, P.M.M.	177, 179	SPALL, S.	260	STEELE, M.	170
SOBCHAKOV, L.A.	216	SPALLA, P.	219	STEEN, A.	227
SOBOLEV, R.N.	92	SPALLAROSSA, D.	64, 79, 82	STEENHUIS, T.S.	147, 153
SOBOLEV, S.	87	SPAMPINATO, S.	92	STEER, D.	86, 87
SOBOLEV, S.V.	79, 82	SPANG, R.	184, 208	STEFANICKI, G.	191
SOBOLEV, YA.P.	267	SPANNE, P.	108	STEFANSSON, R.	78, 272
SOBRINO, J.A.	107	SPANO, M.	77	STEFANUTTI, L.	228
SODERBLOM, L.	249, 250	SPATARO, W.	271	STEGNER, A.	265, 266
SODERKVIST, J.	170	SPATHARAS, V.	104	STEIDL, J.	141, 155, 156
SÖDING, A.	213	SPATZ, C.	198	STEIL, B.	226
SOEDING, A.	214	SPECHT, C.	136, 137	STEIN, B.	228
SOEGAARD, H.	154, 174, 176, 177	SPEER, K.	166	STEIN, J.	258, 268
SOFFEL, H.	82	SPEER, K.G.	166	STEIN, M.	98
SOFIANOS, S.	161	SPEICH, S.	191	STEIN, R.	261
SOFKO, G.	217	SPELLA, M.	101	STEIN, R.S.	89, 275
SOGAARD, H.	154	SPENCE, G.	118	STEINBACH, V.	69, 236
SOHL, F.	250	SPENCE, G.D.	117, 118	STEINBERG, D.K.	163
SOHLEID, P.	100	SPENCER, P.	76	STEINBERGER, B.	69, 72, 77
SOKOLOV, S.D.	80	SPERANZA, F.	63, 101	STEINBRECHER, R.	187
SOKOLOV, V.YU.	272, 274, 276	SPERBER, K.R.	191	STEINER, A.	129
SOKOLOVA, YU.F.	77, 78	SPERBER, P.	135	STEINER, N.	169
SOKOLOVSKIY, M.	266	SPEER, C.	148	STELLING, G.S.	270
SOKOV, A.V.	161, 162	SPERNER, B.	63, 64, 76, 85	STELTER, G.	162
SOL, G.	209	SPETH, P.	188, 191, 204, 205	STEMBERK, J.	271
SOLAR, G.S.	111	SPICAK, A.	82, 105, 106	STEMMANN, L.	167
SOLARI, P.	158	SPICHTINGER-RAKOWSKY, N.	228	STENCHIKOV, G.	202
SOLARIC, M.	136	SPIEGEL, E.A.	265	STENCHIKOV, G.L.	183
SOLARINO, S.	64	SPIEGELBERG, H.	108	STENDEL, M.	181, 192, 193
SOLDATI, G.	104	SPIERS, C.J.	108	STENSRUD, D.J.	256
SOLDATI, M.	279	SPIESS, V.	120	STENUM, B.	265
SOLER, J.M.	111	SPIETZ, P.	194, 195	STEPANIAN, Z.	273
SOLER, M.R.	173, 175, 177, 257	SPINDLER, G.	176	STEPANOV, A.E.	209
SOLHEIM, F.S.	129	SPINDLER, S.	80	STEPANOV, V.	221
SOLHEIM, L.P.	69, 82	SPINHIRNE, J.	184	STEPANOV, V.A.	221
SOLIDORO, C.	172, 260	SPISIAK, J.	85	STEPANOVA, I.E.	66
SOLNTSEV, R.N.	210	SPITTLER, M.	187	STEPANYANTS, YU.A.	169
SOLOGASHVILI, D.	97	SPITZER, E.	235	STEPHANOU, E.	187
SOLOMON, R.	202	SPITZER, H.-J.	174	STEPHANOU, E.G.	199, 204, 205
SOLOMON, S.	193	SPOHN, T.	236, 241, 250	STEPHEN, A.V.	256
SOLOMON, S.C.	249	SPOSATO, A.	89	STEPHENS, D.	249
SOLOVIEV, A.	77	SPREITER, J.R.	215	STEPHENSON, D.B.	183, 192, 226, 227
SOLOVIEV, V.	118	SPRINGER, A.	147	STEPHENSON, R.A.	73
SOLOVJEVA, T.V.	210	SPRINGER, T.	124, 133, 134	STEPNIK, B.	241
SOLYMAR, M.	108	SPRINGER, T.A.	124	STERL, A.	171
SOMERVILLE, R.C.J.	184	SPUDIS, P.D.	245, 246	STETIAROVA, J.	218
SOMLETTE, L.	158	SPULSI, G.	267	STEVENS, C.	81
SOMMER, H.	143	SRAMA, R.	244	STEVENSON, D.	233
SOMMERIA, J.	248, 265	SRIVASTAVA, K.	240, 241	STEVENSON, D.S.	197, 198, 230, 233
SOMOV, B.V.	223	SRODA, P.	83, 84	STEWART, D.	194, 195
SONDAG, F.	158	SSN SEISMIC MONITORING		STEWART, I.	275
SONG, P.	211, 220	WORKING GROUP	89	STEWART, M.	108
SONNLEITNER, M.	147	ST. CYR, C.	223	STHOL, A.	226, 227
SOPHOCLEOUS, M.A.	152	STADNITSKAYA, A.	119	STIANSEN, J.E.	257
SORENSEN, J.H.	177	STAEHELIN, J.	228	STIEVENARD, M.	189
SORENSEN, S.-A.	278	STAGI, L.	145	STILLER, M.	83, 84, 86, 87
SORGE, S.	244	STAHARA, S.S.	215	STIRLING, J.R.	259
SORGENTE, M.	134	STAJNER, I.	203, 208	STIROS, S.C.	122, 123
SORIANO, C.	94	STAMATIOU, N.	211	STÖBENER, D.	196, 197, 205, 206
SORNETTE, D.	255	STAMM, C.	147	STOCCHINO, C.	123
SOROKHTIN, O.G.	238	STAMPFLI, G.M.	63, 84	STOCKDALE, T.	124, 183, 191
SOROKIN, A.	233	STANCHEVICI, B.	106	STOCKER, T.F.	161, 162, 165

STOCKHAUSEN, H.	99	SULPIZIO, R.	278	TALBI, A.	157
STÖCKHERT, B.	81	SÜLTENFUSS, J.	161	TALBOT, C.	76, 77
STOCKMAN, H.W.	109	SULZER, M.P.	211	TALBOT, C.J.	76
STOECKEL, M.E.	157	SUMMANEN, T.	213, 214	TALIPOVA, T.	167, 168, 263
STOENS, A.	260	SUMMERFIELD, M.	75	TALITSKY, V.G.	68
STOHL, A.	231	SUN, W.	131	TALKNER, P.	191
STOKER, C.	250	SUN, Z.L.	263	TALLARICO, A.	93
STOLL, J.B.	112, 114	SUNDBY, B.	199	TALPSEPP, L.	168
STOLLEY, M.	162	SÜNDERMANN, J.	132, 165	TAMAKI, K.	117
STONE, L.	256	SÜNKEL, H.	127	TAMBURELLI, C.	64, 65
STONE, R.	233	SUNNENBERG, G.	194	TAMMARO, U.	277
STONE, R.G.	213	SUO, Y.	220	TAMPIERI, F.	174, 259, 260
STONER, J.	98	SUPPAN, P.	197, 198	TAMPIERI, F.	175
STOPIN, A.	108	SURKOV, YU.	245	TAN, D.G.H.	260
STORELMO, L.	108	SURUGUE, M.	158	TANAKA, H.	108, 243, 244, 248
STOREY, J.	217	SUSAGNA, T.	276	TANAKA, K.K.	243, 244
STORM VAN LEEUWEN, E.	150	SUSINI, C.	280	TANAKA, S.	245
STORTI, G.	268	SÜSS, P.	73	TANAKA, Y.	272, 273
STORTINI, M.	269	SUSSKIND, J.	189	TANDA, M.G.	140
STORZ, W.	108	SUTISNA, S.	123	TANG, C.L.	125
STOUFFER, R.J.	183	SUTTON, R.T.	165, 190, 191	TANG, J.-C.	82
STOUT, Q.F.	211, 213, 240	SUTYRIN, G.G.	265	TANIS, F.	169
STOWASSER, M.	227	SUURSAAR, Ü.	168	TANK, V.	233
STRACHAN, L.	225	SVALOVA, V.	78, 79	TANNER, D.J.	196, 197
STRADA, L.	199	SVALOVA, V.B.	73, 76	TANSLEY, C.	169
STRAKHOV, A.V.	66, 105	SVANCARA, J.	85	TAPIAS, J.	155
STRAKHOV, V.N.	66, 105	SVEDHEM, H.	244	TAPLEY, B.D.	124, 127, 128
STRAMONDO, S.	89	SVENDSEN, H.	257	TAPPONNIER, P.	75
STRANGEWAY, R.	217	SVENSMARK, H.	225	TARASOV, P.E.	65, 66, 189
STRASS, V.H.	171	SVENSSON, A.	198	TARASOV, V.	222, 240, 241
STRATFORD, K.	198	SVITLOV, S.	137, 138	TARBELL, T.D.	224
STRAUSS, B.	255	SVOBODA, A.	148	TARCHI, D.	123
STRAZZULLA, G.	242, 243	SVOBODA, M.	144	TARDIF, H.	80
STRECK, M.J.	95	SWANEY, D.	153	TARICCO, C.	225, 245
STRECKER, M.	257, 275	SWIDROWSKA, J.	83	TARITS, P.	112
STRECKER, M.R.	275, 276	SWIERCEWSKA, A.	85	TARLING, D.	104
STREIT, R.	272	SWIERCZEWSKA, A.	85	TARRASOV, V.	213
STRELEC-MAHOVIC, N.	179	SWIFT, J.	170	TARTINVILLE, B.	167
STROEV, P.A.	70, 72	SWINBANK, R.	208	TASSONE, A.	86
STRÖM, J.	233	SWINYARD, B.M.	246-248	TATARINOV, V.N.	71, 108
STROMEYER, D.	104, 105	SY, A.	162	TAUPIER-LETAGE, I.	167
STROMME, A.	211	SYLVANDER, B.	116	TAUPIN, J.-D.	188, 189
STRUGLIA, M.V.	179, 201, 265	SYLVANDER, M.	64	TAURAT, D.	179
STRUNIN, M.A.	175	SYMONS, D.T.A.	98	TAUXE, L.	98
STRYKOWSKI, G.	66, 67, 105	SYNDERGAARD, S.	129	TAVERA, H.	88
STRZYSZCZ, Z.	101	SYRIOPOULOU, D.	151	TAYLOR, B.	76
STUBBE, P.	215, 216	SZABO, A.	220	TAYLOR, C.M.	155
STÜBEN, D.	200	SZARKA, L.	107, 112, 113	TAYLOR, F.W.	225-227, 239
STUCCHI, M.	64, 65, 90, 274	SZCZAP, F.	185, 254	TAYLOR, J.	93
STÜDEMANN, O.	177, 187, 188	SZCZESNY, R.	85	TAYLOR, J.R.	217
STUEMPEL, H.	103	SZEGO, K.	240, 241	TAYLOR, P.K.	181, 182
STUHLMANN, R.	185	SZEREMETA, N.	98	TAYLOR, S.	181
STUHNE, G.R.	265	SZINELL, CS.	144, 145, 279	TCHIOVA, E.	153
STULC, P.	65, 66	SZÖCS, G.M.	209	TCHISTOVA, Z.B.	106
STÜMPPEL, H.	103	SZÖCS, H.	209	TEALAB, A.	81
STUMPTNER, W.	238, 239	SZÖCS, H.L.	180	TEALEB, A.A.	103
STURGES, W.O.	195	SZOLUCHA, M.	136, 137	TEBBENS, S.F.	119, 255
STURGES, W.T.	194, 195	SZTOBRYN, M.	200, 201	TEDESCO, D.	93
STURM, M.	101	SZULCZEWSKI, M.	84	TEERI, J.	176
STURNIOLO, O.	184	SZUNYOGH, I.	181	TEICHMANN, U.	176
STUTZ, J.	195, 197, 198	SZYMANSKI, J.E.	103	TEISSEYRE, R.	75
STUTZER, S.	166, 169	SZYMONSKI, M.	136, 137	TEJEDOR, L.M.	168
SUAREZ DEL RIO, L.M.	109	TABANAKOV, I.V.	212	TEJEIRO, I.	267
SUAREZ, M.	202	TABBAGH, A.	102	TEL, T.	260
SUAREZ, M.J.	146	TABERNER, C.	73	TELES, V.	139
SUAREZ, N.	99	TABERNER, M.J.	155	TELESCA, L.	252
SUBBOTINA, M.M.	168	TABOADA, J.J.	163	TELLAM, J.H.	141
SUBKLEW, G.	150	TACHER, L.	140	TEMERIN, M.	223
SUC, J.-P.	189	TACHIKAWA, K.	198	TEMPERVILLE, A.	260
SUCHARSKI, R.	250	TACHIKAWA, Y.	146	TEN BRUMMELHUIS, P.G.J.	200, 202
SUCHARSKI, T.	250	TACONET, O.	157	TEN, A.	263
SUCHY, J.	271	TADDEUCCI, J.	93	TENAP GROUP	86
SUCHY, V.	73	TAFFERNER, A.	231, 233, 235	TENHUNEN, J.	177
SUDICKY, E.	139	TAGLIAZUCCA, M.	175	TENNANT, K.	130
SUE, C.	79	TAIEB, M.	99	TENTLER, T.	108
SUETNOVA, E.	86, 111	TAIT, S.	92, 95	TER VOORDE, M.	73
SUGIER, J.	194, 196, 197	TAKACS, L.	202	TERASAWA, T.	222
SUHADOLC, P.	64, 65, 75, 277	TAKAHASHI, K.	212, 220	TERECHTENKOV, V.P.	162
SUHRE, K.	231	TAKAHASHI, M.	112	TEREKHOVA, O.A.	197, 198, 226, 227
SUKHORADA, A.V.	96, 97	TAKAHASHI, N.	82, 115	TERESCHENKOV, V.P.	161, 164
SUKHORUKOV, A.I.	215	TAKANA, H.	113	TERLIEN, M.T.J.	275
SUKHORUKOVA, G.V.	214	TAKASAO, T.	146	TERMENS, A.	123
SULEIMAN, A.	275	TAKEUCHI, S.	246	TERNAN, J.L.	160
SULEM, P.L.	215	TAKUMI, I.	273	TERNON, J.F.	161
SULLIVAN, R.	237, 251	TALAGRAND, O.	204, 226, 238, 239, 255	TERRAY, L.	165, 183
SULLIVAN, R.J.	237	TALAYA, J.	123	TERRY, J.	189

TERTULLIANI, A.	274	TIMMERMAN, R.	171	TRESSOLS, F.	113
TERZIJSKI, I.	109	TIMMRECK, C.	208, 231	TRETYAK, K.	137, 138
TESAURO, M.	89	TIMOKHOV, L.	169, 171	TREUMANN, R.	223
TESCARO, N.	268	TINARELLI, G.	191	TREUSOV, A.V.	87
TESI, G.	179	TINIVELLA, U.	118	TREVISAN, A.	204
TESOURO, M.	179	TINTI, S.	129, 267, 268	TRIANTAFYLIDIS, P.	277
TESSARI, U.	279	TIPPKE, J.	178	TRIC, E.	68
TESTUT, L.	127	TISCHNER, T.	141	TRICART, P.	79
TETT, S.F.B.	193	TITISHOV, K.	265	TRICIO, V.	108, 173
TETZLAFF, G.	174, 175	TITOV, D.	249	TRICKL, T.	231
TEUBEL, A.	124, 135, 219	TITOV, D.V.	249	TRIER, S.	181
TEUTSCH, G.	139, 149	TITOV, O.	133	TRIESCHMANN, O.	227
TEVES-COSTA, P.	109, 110, 276	TITOV, V.B.	167	TRIFONOV, V.G.	274
TEVISSSEN, E.	109, 111	TITOVA, E.	218	TRIGILA, R.	93, 94
TEYSSÉDRE, H.	226	TITTGEMEYER, M.	87	TRIGO, I.F.	145, 179
THAMAE, L.	153	TITZ, H.	134	TRIGO, R.M.	189
THEILEN, FR.	267	TOBIAS, A.	129	TRILLA, J.	142
THEISS, D.	176	TODD, M.C.	155	TRILLING, D.E.	248
THEMIER, F.	109	TODINI, E.	140, 141, 152, 268	TRIMBY, P.	117
THEOCHARIS, A.	166, 172	TODLING, R.	203	TRINI CASTELLI, S.	174
THEODOULIDIS, N.	277	TODMAN, S.	139	TRIQUE, M.	112
THEOPOLD, F.A.	184	TOEWS, D.	152	TRISKA, P.	220-222
THERY, C.	202, 234	TOKARSKI, A.K.	84, 85	TRISKOVA, L.	209, 219
THEVENET, A.	156	TOKSÓZ, N.	81	TRITSCHLER, A.	151
THIBAUD, R.	119	TOKUNAGA, A.	239	TROFIMOV, V.A.	271
THIBAUT, M.	79, 80	TOLEDO MACHADO, L.A.	254	TROISE, C.	92-94, 277
THIELE, M.	143	TOMASI, P.	134, 135	TROISI, A.	93
THIELE, P.	150	TOMASIN, A.	173, 191, 201	TROITSKAIA, E.V.	225
THIELEN, J.	157	TOMASINI, M.	265	TROLARD, F.	151
THIEMANN, H.	209	TOMASKO, M.	249	TROMBETTI, F.	175
THIERRY, V.	166	TOMASKO, M.G.	249	TROMP, J.	69, 91
THINON, I.	116	TOMCZAK, M.	243	TROTIGNON, J.G.	221
THIO, H.K.	69, 88	TOMECKA-SUCHON, S.	104, 110	TROUDE, F.	177
THIROT, J.L.	115, 117	TOMEK, C.	84, 85	TROUFLEAU, D.	154
THMOAS, N.	250	TOMIDA, N.	108	TROVA, A.	110
THOMA, C.	269, 270	TOMIDE, N.	113	TROVATORE, E.	268
THOMA, M.	71	TOMMASI, E.	248	TRUFFERT, C.	79, 80
THOMAS, L.	95	TOMMASINI, S.	95	TRUHLIK, V.	209, 219
THOMAS, M.	132, 169	TOMOV, B.T.	211, 218	TRYGGVASON, A.	92
THOMAS, N.	232, 240, 241, 247, 249-251, 261	TOMPKINS, A.M.	192, 239	TRZASKA, S.	188, 191
THOMAS, N.P.J.	203	TONDI, E.	89	TSAL, L.C.	209
THOMAS, P.	237, 238	TONELLI, G.	279	TSAL, W.-P.	126
THOMPSON, B.	213, 225	TONTI, G.	129	TSAKIRI, M.	135
THOMPSON, K.	194, 195, 250	TOOLE, J.M.	161	TSALAS, M.	222
THOMPSON, K.R.	201	TOOR, P.C.	129	TSAPANOS, T.M.	271, 272
THOMPSON, L.A.	125, 126	TOR WORKING GROUP	84	TSAREV, V.I.	135
THOMPSON, R.	96, 97	TORELLI, L.	87, 114	TSCHERNING, C.C.	131
THOMPSON, W.T.	224	TORGENSEN, J.	148	TSCHUCK, P.	191, 192
THOMPSON, K.	250	TORKAR, K.	222	TSELIODIS, G.	228
THOMSEN, D.	103	TORNE, M.	70, 73	TSIMPLIS, M.N.	173
THOMSON, S.N.	81	TOROCZKAI, X.	260	TSIOURI, I.	197, 198
THONY, J.L.	157, 158	TORRENCE, M.	122	TSITVERBLIT, N.	259
THORKILDSEN, F.	171	TORRENCE, M.H.	124, 134	TSOKAS, G.	78, 79
THORNCROFT, C.	180, 188, 189	TORRENTE, M.M.	74	TSONIS, A.A.	257
THORNCROFT, C.D.	188, 190	TORRES, L.	186	TSURU, T.	71
THORNTON, S.R.	127	TORSÖN, J.	250	TSURUTANI, B.T.	213
THOROLFSSON, A.	210	TORTA, J.M.	106	TSVANG, L.R.	175
THORPE, A.J.	179-181	TOSCA, C.	157	TSVETKOV, YU.P.	106, 107
THORSTEINSSON, S.	203	TOSI, E.	191, 192, 201	TSYMBAL, A.M.	210
THOUMIEUX, F.	174	TOSI, P.	274, 278	TTZ WORKING GROUP	83
THOUVENOT, F.	79	TOSITTI, L.	226, 227	TU, C.-Y.	224
THOUVENY, N.	99, 100	TOTH, E.	146	TUBINO, M.	174
THOUZEAU, G.	260	TOTH, T.	90	TUCHOLKA, P.	100, 107
THOVERT, J.-F.	108, 112, 139	TOTH, Z.	179, 181, 203, 204, 255	TUCKERMANN, M.	194
THRANE, E.V.	209	TOTSCHKE, K.U.	140, 149	TUDURI, E.	268
THUBURN, J.	230	TOUBLANC, D.	239, 240	TÜG, H.	205, 206
THUNIS, P.	187	TOUCHARD, G.	109	TUGAROVA, M.A.	147
THURY, M.	111	TOUDAL, L.	170	TUGROVA, M.A.	147
THYBO, H.	77, 78, 83, 84, 86, 87	TOURNOUD, M.G.	253	TULELLI, A.	255
THYKIER-NIELSEN, S.	177	TOURPALI, K.	228, 230	TULET, P.	178
TIAMPO, K.	94	TOZZA, J.-R.	174	TULEYA, R.E.	255
TIAMPO, K.F.	94	TRABING, K.	156	TULIN, M.P.	263, 264
TIBALDI, S.	191, 268, 269	TRACTON, M.S.	203	TULIPANO, L.	142
TIBERIUS, C.	135	TRAHER, F.	280	TULUNAY, Y.	219
TICOSECT AND COTCOR WORKING GROUPS	115	TRAKHTENGERTS, V.	216	TUMBARE, M.J.	153
TIE, X.X.	225	TRAKHTENGERTS, V.Y.	216, 218, 223	TUNON, J.	142
TIKOFF, B.	111	TRAKHTENGERTS, V.YU.	216, 254	TUOVINEN, J.-P.	176, 177
TILLARD, D.	109	TRAMPERT, J.	69	TUR, A.V.	223
TILLMAN, J.E.	249	TRANOS, M.D.	80	TURBERG, P.	140
TIMASHEV, S.F.	207	TRATTNER, K.J.	215	TURCHETTO, M.M.	199
TIMM, F.	112	TRAUTH, M.H.	257, 275, 276	TURCOTTE, D.L.	77, 237, 252, 255, 257
TIMMEN, L.	130, 200, 201	TRAUTHAN, F.	249, 251	TURCOTTE, M.-F.	234, 235
TIMMER, J.	256	TRAUTMANN, T.	186	TURKEVICH, A.	249
TIMMERMAN, A.	139, 147	TRAVERSI, R.	171	TURKO, N.	117
		TRAVI, Y.	154	TURNER, G.	96
		TREGUIER, A.M.	165-167	TURNER, J.	170, 234, 235

TURNER, S.P.	95	VALLEJO, R.	159	VANNUCCHI, P.	252
TURON, E.	94	VALLEJO, V.R.	159	VANNUCCI, G.	274, 277
TURON, F.	94	VALLIANATOS, F.	252, 272	VANYAN, L.L.	108
TURPIN, L.	190	VALLIS, G.K.	161, 266	VARDAS, I.M.	225-227, 239
TURRELL, W.R.	165	VALPREDA, E.	122	VARGA, P.	104, 120, 121
TURRONI, E.	203	VAN AST, J.A.	153	VARGIN, P.	208, 227
TURUNEN, T.	216, 230	VAN ATTA, C.W.	257	VARINOU, M.	230
TUSSEAU, M.H.	198	VAN BAELEN, J.	231	VARLEY, C.	213
TVERBERG, V.	257	VAN BALEN, R.	74	VARLEY, C.A.	213
TWICKEN, J.D.	240	VAN BALEN, R.T.	73, 74	VARNAS, S.P.	200
TYAPKIN, K.F.	72	VAN BEEK, L.P.H.	270, 271	VARNET RESEARCH GROUP	83
TYCHENSKY, A.	125	VAN BUIJSEN, H.J.J.	150	VARNI, M.	142
TYCHON, B.	141	VAN CALSTEREN, P.	95	VAROTSOS, C.	229, 230, 280
TYLER, R.H.	126	VAN DAM, T.	71, 122, 128	VASAS, S.	72
TYLER, S.W.	147	VAN DE GRIEND, A.A.	280	VASILYEV, A.V.	216
TYRNOV, F.	72	VAN DE KONIJNENBERG, J.A.	265	VASSALO PEREIRA, J.	264
TYRNOV, O.F.	209, 210, 216, 219	VAN DEN BERG, A.P.H.	63	VASSARAS, A.	228
TYRNOV, P.F.	219	VAN DEN BERG, A.	236	VASSEUR, G.	157
TYUPKIN, YU.	273	VAN DEN BERG, A.P.	68, 92	VASSILICOS, J.C.	259
TZANIS, A.	114, 272, 277	VAN DEN BERGH, H.	261	VASSILIEV, V.P.	134, 135
TZIAVOS, I.N.	131	VAN DEN BOOGAARD, H.F.P.	200	VAUCLIN, M.	157, 158
UDIAS, A.	63, 88	VAN DEN BROEK, M.M.P.	228	VAUGHAN, G.	231
UDISTI, R.	171	VAN DEN DRIESCHE, J.	113	VAUTARD, R.	191, 203, 204, 255, 260-262
UENZELMANN-NEBEN, G.	120	VAN DER BEEK, P.	75	VAUTERIN, P.	122
UFIMTSEV, G.F.	75	VAN DER HEIDE, E.J.	67	VAVRYCUK, V.	91
UGALDE, A.	277	VAN DER HILST, R.	68, 69	VEERSE, F.	125, 201, 202
UHLENBROOK, S.	152, 154	VAN DER LINDEN, R.A.M.	213	VEGA, A.	234, 235
UHLMAN, J.	235	VAN DER MAREL, H.	134	VEIS, G.	81
UIJLENHOET, R.	145	VAN DER MEER, R.	73, 74, 78	VEITEL, H.	185
UITTENBOGAARD, R.E.	167	VAN DER MEULEN, M.J.	63, 64	VEITEL, H.J.	230
UKITA, J.	169	VAN DER PLICHT, J.	189	VEJBAEK, O.V.	83
ULAMEC, S.	241, 242	VAN DER SCHRIER, G.	162	VELASCO FUENTES, O.U.	266
ULBRICH, U.	155, 165, 193	VAN DER VAART, P.C.	191	VELICOGNA, I.	106
ULLALAND, S.	212, 217	VAN DER VEEREN, R.	153	VELIKIN, S.	92
ULYSSES COMET WATCH	213	VAN DER ZAAK, P.	153	VELTRI, P.	215
UNDERWOOD, M.J.	217	VAN DER ZEE, W.	112, 113	VENDEVILLE, B.	76
UNNIKRISHNA, P.V.	148	VAN DEURSEN, W.P.A.	153	VENDEVILLE, B.C.	76
UNOLD, W.	194	VAN DINGENEN, R.	187	VENEDIKOV, A.	272
UNTERNEHR, P.	76	VAN DISHOECK, E.	248	VENEZIANO, D.	252, 253
UNZOG, W.	85	VAN DORPE, F.	158	VENHODOVA, D.	102
UOTILA, J.	171	VAN DRIEL-GESZTELYI, L.	225	VENNERSTROEM, S.	216
UPHAM, C.A.	129	VAN DUIN, C.A.	263	VENTURA, R.	214
URAI, J.L.	107, 111-113	VAN ECK, T.	85, 86	VENZKE, S.	165
URANIA 19/97 CRUISE PARTY	65	VAN EIJK, M.	191	VERBEQUE, V.	169
URBAN, J.	209	VAN EYKEN, A.P.	211	VERBRUGGE, N.	165
URBAT, M.	96, 97	VAN GEEL, B.	189	VERDOYA, M.	68
URQUHART, A.	220	VAN GORDER, S.	162	VERECKEN, H.	141, 253
URQUIZU, M.	92, 257	VAN GROENESTIJN, J.W.	150	VERGARA, M.	68
URRUTIA, J.	99	VAN HEIJST, G.J.F.	266	VERGASSOLA, M.	264
URSEIS RESEARCH GROUP	86, 87	VAN HOOLST, T.	133	VERKLEY, W.T.M.	266
URUSKI, C.	118	VAN HUNEN, J.	68	VERLAAN, P.A.J.	144
USHAKOV, S.A.	238	VAN KESTEREN, W.G.M.	119	VERMEERSEN, L.L.A.	70-72, 104
USHAKOVA, L.A.	238	VAN LAMMEREN, A.	184	VERMIGLI, S.	171
USUNOFF, E.	142	VAN LEEUWEN, P.J.	162	VERNETA, A.I.	224
UTKIN, I.V.	149	VAN LIERE, H.C.	150	VERNON, R.	103
UTKIN, K.B.	259	VAN MEERVELD, H.J.	280	VERON, A.	101, 198
UTNES, T.	169, 234, 235	VAN MEIR, N.	140	VEROSUB, K.L.	98-101, 103
UVCS TEAM	224	VAN MIERLO, J.M.C.	144	VERRET, R.	234, 235
UVO BERTACCHI, C.	144	VAN OLDENBORGH, G.J.	190, 191	VERRON, J.	201, 202, 266
VACARESSE, A.	211, 212	VAN OORSCHOT, I.H.M.	101	VERRUBBI, V.	122
VACCARI, F.	64, 271	VAN VELTHOVEN, P.	230	VERSACE, C.	145, 270
VACCARO, L.	189	VAN VELTHOVEN, P.F.J.	232	VERSACE, P.	270, 271
VACHAUD, G.	158	VAN WEELE, M.	233	VERSIANI, B.R.	269
VACHER, P.	68, 69	VAN WEES, J.-D.	73, 74	VERSTRAETE, W.	246
VADILLO, O.	77	VAN WEES, J.D.	73, 74, 85	VERTYTSKYJ, O.	137, 138
VADON, H.	123	VAN WESEMAEL, B.	160	VESALA, T.	176, 192
VAGGELLI, G.	95	VAN WIJK, J.W.	70	VESELOV, M.V.	222
VAGIN, S.A.	113	VAN WYK DE VRIES, B.	95	VESPE, F.	72, 124, 134, 136
VAGINA, L.I.	212	VAN YPERSELE, J.-P.	183	VESPOLI DE CARVALHO, L.M.	254
VALCHUK, T.E.	215	VANBAUCE, C.	192	VESTED, H.J.	201
VALCKE, S.	183	VANBRABANT, F.	276	VETTORE, A.	277, 278
VALDES, P.J.	155, 193	VANCLOOSTER, M.	147	VEYSSY, F.	199
VALDETTARO, L.	257	VANDAMME, D.	97, 98, 101, 102	VIAL, J.C.	224
VALENSISE, G.	75, 90, 274	VANDEMARK, D.	182	VIALARD, J.	191
VALENTE, M.A.	258	VANDENBUSSCHE, B.	247, 248	VIALLEFOND, L.	80
VALENTIN, J.C.	234	VANDENHAUTE, M.	176	VIBERT-CHARBONNEL, P.	100
VALENTINI, G.	276	VANDER BORCHT, P.	141	VICENTE, G.A.	145
VALENTINI, R.	176, 186	VANDERBORGHT, J.	147	VICHI, M.	260
VALENTINOTTI, F.	201	VANDERMEIRSCH, F.	266	VIDA, R.	90
VALERO, H.P.	90	VANDERSTEEN, K.	139	VIDAL MADJAR, D.	157, 280
VALERO-GARCES, B.	159	VANGRIESHEM, A.	189	VIDAL, F.	277
VALES, D.	88	VANNESTE, J.	263	VIDAL, N.	86, 119
VALES, N.	237	VANNI DESIDERI, A.	277	VIDAL, O.	234, 235
VALETT, H.M.	148	VANNINI, G.	277	VIDAL-MADJAR, D.	280
VALETTE, B.	236	VANNITSEM, S.	255	VIDALI, G.	244
VALINHAS, M.J.	280	VANNOCCI, P.	271		

VIDE, J.P.M.	160	VOKROUHLICKY, D.	124, 246	WASEDA, A.	118
VIDOTTI, R.M.	74	VOKROUHLICKY, D.	246	WASEDA, T.	263, 264
VIDUEIRA, D.	269	VOLCKAERT, G.	112	WASILEWSKI, P.	236, 240
VIEDMA, O.	159	VOLKONSKAYA, A.	119	WASOWSKI, J.	275, 276
VIEIRA, R.	127	VOLKOV, YU.A.	182	WATANABE, S.	209, 210
VIEUX, B.	157	VOLKOV, YU.A.	177	WATERS, J.W.	209, 226, 227
VIEUX, B.E.	153	VÖLKSEN, C.	94	WATKINS, M.	124, 134
VIEZZOLI, D.	169	VOLOKH, A.A.	197, 198	WATKINS, M.M.	71, 134
VIGNERESSE, J.L.	76, 79, 111	VOLOKITIN, A.S.	216	WATKINS, N.W.	222
VIGNES, D.	157, 240	VOLOZH, YU.	76	WATSON, A.	161
VIGNOLES, G.	109	VOLPI, G.	114	WATSON, B.	254
VIGNOLI, R.	268	VOLTZ, M.	141, 157, 160	WATSON, K.	128
VIGNUDELLI, S.	164	VOLZ-THOMAS, A.	196, 197	WATSON, S.P.	139
VIGNY, C.	81, 134	VOM ENDT, A.	223	WAUBEN, W.M.F.	225, 232
VIHMA, T.	171	VON GLASOW, R.	195	WAUGH, D.W.	208, 232, 261, 262
VILA, J.	92, 173	VON HARDENBERG, J.	232, 258, 266	WAWRZENITZ, N.	80
VILA, P.	219	VON HUENE, R.	115, 118	WAYNE, R.P.	194, 195
VILA, P.M.	209	VON HÜNERBEIN, S.	175	WDOWINSKI, S.	64, 81, 82, 134
VILAR, P.	267	VON STEIGER, R.	214	WEARD, W.	250
VILARDO, G.	88	VON STORCH, H.	167	WEATHERLY, G.	161
VILAS, M.	148	VONDRAK, J.	133	WEATHERLY, G.L.	168
VILKOVA, O.	75	VONG, R.J.	175	WEAVER, J.T.	113
VILLAGARCIA, M.G.	163	VONWINKLE, W.	235	WEBB, F.	134
VILLAIN, J.-P.	216, 217	VORONOV, B.F.	167	WEBB, F.H.	128, 134
VILLAIN, J.P.	217	VÖRÖS, Z.	215	WEBB, M.J.	192
VILLANI, A.V.	103	VOS, R.J.	200, 202	WEBB, S.C.	117
VILLANI, P.	268, 269	VOSS, O.	103	WEBER, G.	129, 134, 136
VILLANUEVA, E.E.	203	VOSS, R.	161, 183	WEBER, J.E.	263
VILLARES, P.	125, 130	VOSTROV, E.A.	155	WEBER, K.	149
VILLASENOR, A.	115	VOUGIOUKALAKIS, G.	277, 278	WEBER, M.	69, 196, 197, 205, 206, 226, 227
VILLEMIN, T.	81, 123	VOZAR, J.	84	WEBER, R.	133, 134
VILLENAVE, E.	194, 195	VOZAROVA, A.	84	WEBER, R.O.	175, 191
VILLINGER, H.	118, 119	VRIEND, S.P.	149	WEBER, S.L.	190
VILORIA, R.	108	VYSKOCIL, P.	136, 137	WEBERS, W.	105, 107
VILORIA, R.E.	173	VYUSHKOVA, T.	208	WEBSTER, C.R.	231
VILTARD, A.	189	WACHS, D.	271, 275	WECKMANN, U.	113
VIMEUX, F.	189	WACHSMUTH, M.	194	WEDEKIND, C.	228
VINCENS, A.	99	WADHAMS, P.	170, 171	WEDI, N.P.	202
VINCENT, D.G.	191	WAEBER, W.	168	WEERTS, A.H.	110
VINCENT, E.	65	WAGENBACH, D.	194	WEFER, G.	163
VINCENT, M.	200	WAGNER, C.A.	125	WEGEHENKEL, M.	155
VINCENT, P.	200	WAGNER, F.C.	108	WEHDE, H.	169
VINCENZI, S.	146	WAGNER, R.	237, 238, 246	WEHRENPENNIG, A.	129
VINCIGUERRA, S.	278	WAGNER, T.	184, 195, 227	WEHRLE, V.	76
VINE, P.	159	WÄHLISCH, M.	245	WEI, M.	130
VINNIK, L.P.	87	WAHLUND, J.E.	246	WEICHMAN, P.B.	257
VINTZILEOS, A.	183	WAHR, J.	71	WEICKMANN, K.	132
VIPOND, A.	194, 195	WAHR, J.M.	127, 128	WEIDINGER, T.	175
VIQALS, E.	142	WAINER, I.	161	WEIGAND, H.	149
VIRAMONTE, J.G.	94	WAKELIN, S.I.	129	WEIJER, W.	162
VIRIEUX, J.	67, 86	WAKIMOTO, R.M.	179	WEILL, A.	192
VIRKKULA, A.	187	WALD, L.	107	WEINBERG, D.M.	118
VIRTANAN, J.	246	WALIA, R.	118	WEINER, R.	196, 197
VIRTANEN, H.	122	WALISER, D.E.	192	WEINGARTNER, R.	269
VISBECK, M.	164-166, 171	WALKER, A.D.M.	217	WEINREBE, W.	115
VISCONTI, G.	228	WALKER, D.	69	WEINSTEIN, D.	153
VISSER, P.	124, 130	WALLANCE, P.J.	116	WEINSTOCK, E.M.	231
VISSERS, M.J.M.	149	WALO, J.	137, 138	WEINZETTEL, P.	142
VITALE, M.	187	WALPERSDORF, A.	81, 123	WEIR, A.L.	239
VITART, X.	111	WALTER, M.	169	WEISBROD, N.	147
VITERBO, P.	181	WALTHAM, D.	73	WEISE, A.	94
VITI, M.	64, 65	WALTHER, CH.H.E.	115	WEISENSE, U.	175
VITOUCHKINE, A.	278	WALTON, D.	96	WEISHEIMER, A.	256
VITTORI, E.	89, 122, 274	WALZ, V.	163	WEISS, J.B.	259, 266
VITTUARI, L.	123, 129, 277	WALZER, U.	68	WEISS, M.	107
VIVIER, F.	125, 126	WANDISHIN, M.	256	WEISS, TH.	87
VLAAR, N.J.	68, 69, 92	WANG, D.	256	WEITKAMP, C.	184, 185, 205, 206
VLADIMIROV, S.V.	216	WANG, K.	71	WEITZ, C.	245
VLADIMIROV, Y.V.	168	WANG, L.	129	WELKER, E.	106
VLADIMIROVA, G.A.	222	WANG, R.	203	WELLE, W.	272, 278
VLAG, P.	99	WANG, S.	99, 100	WELLER, R.	204-206
VLASENKO, T.S.	197, 198	WANG, X.	220	WELLES, J.M.	176
VLASOV, S.N.	253	WANG, Y.	225, 233	WELLS, N.C.	166
VLASOV, Y.T.	108, 112, 113	WANG, Y.M.	124, 130	WEMAERE, I.	141
VLASTOU, G.	226	WANG, Z.	104, 106	WENDROTH, O.	148
VODOPIVEC, F.	136	WÄNKE, H.	249-251	WENDT, J.	77
VOELKER, A.	98	WARD, R.	147	WENG, PH.	146
VOEYKOV, A.I.	229	WARD, W.	250	WENZEL, F.	64, 85-87
VOGEL, B.	177	WARDINSKI, I.	256	WERNER, T.	96, 97
VOGEL, M.	176	WARELL, J.	236	WERNIK, A.W.	215
VOGEL, T.	150	WARN-VARNAS, A.	169, 172, 173	WERNLI, H.	179, 231
VOGFJORD, K.	78	WARNANT, R.	134	WESSEN, K.	148
VOGT, R.	195	WARNCKE, T.	266	WEST, B.P.	116
VOGT, T.	155	WARREN, M.S.	268	WEST, R.	239
VOIGHT, B.	93	WÄSCH, R.	243, 244	WESTERHAUS, M.	278
VOITA, J.	221	WÄSCH, U.	243, 244		

WESTZTERGOM, V.	112	WINKLER, A.	64, 99, 151	WYSER, K.	233
WESZTERGOM, V.	107	WINKLER, D.	184	WYSS, M.	91, 271, 272
WETZEL, G.	227	WINTER, TH.	75	WYZGA, B.	269
WEWEL, F.	135, 136	WINTER, U.	92	XIA, Y.	126
WHEATER, H.S.	268	WINTERHALTER, R.	187, 188	XU, C.-Y.	144
WHITAKER, A.C.	152	WINTERS, K.B.	257, 258	XU, G.	130
WHITAKER, B.J.	196, 197	WINTERS, W.	118	XU, H.	144, 170, 190
WHITAKER, M.	76	WINTERS, W.J.	118	XU, J.S.	209
WHITE, D.J.	86	WINZER, W.	126	XU, K.-M.	188, 192
WHITE, E.	113	WIPFLER, E.L.	140	XU, Z.	202
WHITE, O.R.	225	WIRTH, A.	202	XUE, M.	256
WHITE, R.S.	117	WIRTH, M.	228, 280	XUE, Y.	155, 188
WHITE, S.	152	WIRTH, V.	230-232, 261, 262	YABASHI, S.	273
WHITE, S.H.	81	WIRTZ, K.	187	YAGI, M.	118
WHITE, S.M.	152-154, 269	WISCOMBE, W.	185	YAGOVKINA, S.	226
WHITE, W.	181	WISCOMBE, W.J.	254, 257	YAHNIN, A.G.	220
WHITE, W.B.	190	WITASSE, O.	210	YAKIMOVA, G.A.	219
WHITEHOUSE, S.G.	238	WITTEMBERG, R.	239, 247	YAKUBENKO, V.G.	167
WHITEWAY, J.A.	208	WITTERNIGG, N.	184	YAKUNIN, M.N.	210
WHITMARSH, R.B.	116	WITTMAN, C.	176	YAKUPOV, A.SH.	97
WHITTAKER, J.	139	WITTMANN, K.	241	YAKYMCHUK, M.	105
WHITTINGTON, R.J.	120	WITTROCK, F.	194, 195	YAKYMCHUK, N.	105
WHYBORN, N.	209	WOBROCK, W.	186	YAKYMCHUK, Y.	105
WIBBERENZ, G.	223	WOCH, J.	213, 216, 217, 241	YAMADA, I.	245
WIBBERLEY, C.	113	WODE, CH.	175	YAMAGATA, T.	266
WICHT, J.	133	WODNICKA, E.B.	223	YAMAMOTO, H.	113
WICKERT, B.	178	WOELBERN, I.	84	YAMAMOTO, T.	212, 214, 217, 272, 273
WICKTOR, F.	196	WOELK, S.	162	YAMASHITA, T.	89
WIDEMANN, D.	101	WOELZ, S.	103	YAMAZAKI, Y.H.	180
WIDEMANN, T.	248	WOFISKY, S.	177	YANG, F.	226, 227, 232, 233, 262
WIDMANN, M.	165	WOFISY, S.	176	YANG, J.	139
WIECHEN, H.	222	WOFISY, S.C.	231	YANG, R.K.	82
WIECZOREK, J.	83	WOHLENBERG, J.	78	YANG, S.	96, 97, 103
WIELER, R.	214	WOHLETZ, K.	95	YANOVSKAYA, T.	75
WIELGOSZ, P.	134	WOHLGEMUTH, J.	209	YANOVSKY, V.V.	223, 253, 254
WIEMER, S.	91, 271, 272	WOHLGEMUTH, L.	78	YAO, Z.S.	91
WIENS, B.	234, 235	WOHLTMANN, I.	227	YARAI, H.	272
WIEPRECHT, E.	248	WOLDETINSAE, G.	107	YARAS, M.I.	234
WIEPRECHT, W.	229	WOLF, A.	186, 187	YAREMCHUK, M.	201
WIGGINS, S.	258, 259	WOLF, D.	71, 122	YASAR, D.	119
WIGNERON, J.-P.	146	WOLF, F.	256	YASONOV, P.G.	96, 97
WIGNERON, J.P.	157	WOLF, S.	166	YASONOV, P.P.	98
WIJK, J.E.	223	WOLF, U.	237, 238	YASUHARA, M.	149
WIJBRANS, J.R.	81	WOLFF, G.	177	YEARBY, K.H.	222
WIKBERG, P.	141	WOLFF, J.-O.	169	YEGOROVA, T.P.	66, 73, 84
WIKSTOL, O.	224, 225	WOLKE, R.	229	YEH, Y.T.	82
WILBER, M.	212	WOLSKI, A.	136, 137	YELLAND, M.J.	182
WILD, M.	186	WONG, T.-F.	109	YELLES, A.	102
WILDE-PIORKO, M.	84	WONIK, T.	83, 84	YELLES, K.	120
WILHELM, K.	224, 225	WOOD, M.	233	YEOMAN, T.K.	209, 217
WILHELMS, A.	74	WOODGATE, R.	171	YERMOLAEV, Y.	220
WILHITE, D.	279	WOODHOUSE, J.	69	YERMOLAEV, YU.	217, 220, 221
WILKEN, B.	212-214, 217, 222, 241, 245	WOODS, T.	224	YERMOLAEV, YU.I.	215, 221, 222
WILKINSON, J.	170	WOODSIDE, J.M.	119	YI, Y.	213
WILKINSON, W.	213	WOODWARD, T.I.	240	YILMAZTÜRK, A.	69, 70
WILKINSON, W.P.	213	WOOLLEN, J.	181	YING, J.	88
WILLE, H.	228	WORMS, J.C.	243, 244	YLIKORPI, T.	244
WILLEBRAND, J.	202, 260	WORTEL, M.J.R.	63, 64, 70	YLINIEMI, J.	83, 84
WILLEMSEN, E.	234	WORTHINGTON, R.M.	231	YNNERMAN, A.	222
WILLIAMS, A.	147	WÖSTE, L.	204, 205	YODER, C.F.	72, 236, 249
WILLIAMS, A.G.	160	WOTAWA, G.	177	YOSHIDA, N.	209, 210
WILLIAMS, C.	109, 110	WRIGHT, D.	113	YOSHIDA, S.	112
WILLIAMS, D.J.	220, 241	WRIGHT, G.	155	YOSHINOBU, A.	117
WILLIAMS, I.	247	WRIGHT, I.	115	YOU, Z.	135
WILLIAMS, P.J.S.	209, 213, 218	WROBLEWSKI, A.	201	YOUNG, M.D.B.	146
WILLIAMS, R.	235	WRONOWSKI, R.	222	YOUNG, R.P.	88
WILLIAMS, R.G.	166	WU, J.	220	YOUNG, W.	134
WILLIAMS, S.	128	WU, P.	71, 172, 198	YOUNG, W.R.	257
WILLIAMS, W.	99	WU, W.-S.	181	YOUNIS, M.T.	159
WILLIAMSON, D.	99, 100	WULFF, A.-M.	110	YU, C.H.	246
WILLIAMSON, J.P.	83, 84	WUNDERLI, H.	147	YU, J.-Y.	183
WILLIAMSON, R.G.	124	WUNDERLIN, H.	147	YU, T.-T.	70, 82, 94
WILLINGSHOFFER, E.	85	WUNRAM, C.	233	YU, Y.Q.	128
WILLMOTT, A.J.	169, 170	WURZ, P.	224	YU, Z.Y.	109
WILLSON, C.A.	210	WUST, G.H.	271, 275	YUAN, D.N.	236, 249
WILLSON, R.F.	225	WÜST, J.C.	200	YUAN, X.	69
WILMES, H.	136	WÜST, W.	150	YUDAKHIN, F.N.	275
WILSKE, B.	187, 188	WUTTKE, M.W.	250	YUDKIN, E.N.	244
WILSON, A.	234	WUYTACK, K.	103	YUEN, D.	236
WILSON, C.R.	128, 134, 135	WYATT, F.	134	YUEN, D.A.	69, 70, 72, 77, 92, 236, 263
WILSON, G.	249	WYATT, L.R.	200, 201	YUKHIMUK, A.K.	212
WILSON, G.R.	249	WYBRANIEC, S.	83, 84	YUKHIMUK, V.A.	212
WILSON, L.	95, 117	WYDLER, H.	147, 148	YUNG, K.L.	246
WIMMER-SCHWEINGRUBER, R.F.	214	WYLEGALLA, K.	84	YUNOSHEV, L.	133
WINGHAM, D.	71	WYNS, R.	79	YURIK, R.YU.	218
WINK, J.	243	WYPUTTA, U.	189	YURKOV, A.	273

YUSHKOV, V.P.	204	ZEHE, E.	147	ZILJOLI, E.	279
ZABEK, Z.	137, 138	ZEITLER, W.	237, 251	ZILITINKEVICH, S.	174
ZABLE, F.	194, 195	ZEITLIN, V.	266	ZILLIOX, L.	158
ZABLOTSKIJ, F.	136	ZELENOV, V.V.	196	ZIMMARO, S.	271
ZABLOTSKYJ, F.	137, 138	ZELENYI, L.	217, 220, 221	ZIMMER, C.	240
ZABYSHNYI, A.I.	264	ZELENYI, L.M.	211, 215, 220-222	ZIMMER, M.	277
ZACHARIAS, I.	144	ZELLAGUI, R.	113	ZIMMERMAN, M.E.	111
ZACHARIAS, I.Z.	270	ZELLMER, G.	95	ZIMMERMAN, W.B.	258
ZADRO, M.	105	ZELLNER, R.	186, 194	ZIMMERMANN, G.	109
ZAGWODZKI, T.	135	ZELT, C.	74, 116	ZIMMERMANN, L.	146
ZAHARIEV, V.	228	ZEMAN, A.	136	ZININ, L.	220, 222
ZAHN, A.	230	ZENCHENKO, T.A.	120, 121	ZININ, L.V.	221
ZAHRADNIK, J.	91	ZENGINA, T.J.	276	ZIOMAS, I.	187, 207, 261, 280
ZAIKIN, A.N.	120	ZENT, A.P.	238	ZIPF, E.C.	208, 233
ZAITLEIN, V.	258	ZERBINI, S.	63, 64, 128, 129	ZIQUING, W.	123
ZAITSSEV, V.V.	243	ZEREFOS, C.	197, 198, 226, 227, 261	ZITELLINI, N.	87
ZAITSSEVA, S.A.	214, 216	ZEREFOS, C.S.	228, 230	ZIVCIC, M.	65, 274
ZAJA, A.	114	ZERGA, A.	279	ZLATEV, Z.	177, 229
ZAKEY, A.S.	229	ZERGENYI, R.	101	ZOBIN, V.	91
ZAKHAROV, G.	72	ZERGENYI, R.S.	101	ZOBRIST, J.	151
ZAKHAROV, I.G.	219	ZERNOV, N.N.	220	ZODIATIS, G.	167
ZAKHAROV, V.E.	211, 214	ZERVAKIS, V.	166	ZOETEMEIJER, R.	85
ZAKHAROV, V.I.	130, 209	ZETZSCH, C.	196	ZÖGER, M.	230
ZAKHEM, U.	86	ZEYEN, H.	85	ZOLESI, B.	219, 220
ZAKRI, T.	158	ZEYER, J.	150	ZÖLLER, G.	273
ZALESNY, V.B.	162	ZHAGARS, Y.	134	ZOLLO, A.	89
ZALYTSKY, V.	133	ZHANG, K.	131	ZOLLWEG, J.A.	153
ZAMBONELLI, E.	93	ZHANG, M.-L.	219	ZOLNIKOVA, N.	212
ZAMMIT, C.	158	ZHANG, X.	113	ZOLOTOV, I.G.	182
ZAMORA, M.	110	ZHANG, Y.	171	ZOLTOWSKI, Z.	107
ZANCHETTA, G.	278	ZHAO, Z.YU.	211	ZONG, J.	256
ZANDER, D.	280	ZHARKOV, I.Y.	99	ZONG, Q.	212, 217, 222
ZANELLA, E.	104	ZHARKOV, V.N.	236, 251	ZONG, Q.-G.	212, 217
ZANG, A.	108	ZHARKOV, V.V.	170	ZOOK, H.A.	240
ZANIS, P.	177, 231	ZHELEV, ZH.	105, 106	ZORAN, M.	168, 271
ZAPLETAL, K.	101	ZHENG, Z.	151, 152	ZORIN, YU.A.	81, 87
ZAPPONE, A.	109, 110	ZHONG, W.	208	ZOTH, G.	110
ZARDI, D.	174	ZHOU, S.	83, 84, 87	ZOTOV, O.D.	216
ZARKA, P.	241, 242	ZHOU, X.	220	ZRAUNIG, C.	149
ZARNOWIECKI, T.	245	ZHOU, Z.	77	ZSCHAU, J.	272, 273
ZARRO, D.	225	ZHOVTONOG, O.I.	155	ZUAZUA, E.	159
ZASLAVSKY, Y.M.	253	ZHU, R.	99, 100	ZUBER, M.T.	237, 249
ZASTENKER, G.	220, 221	ZHU, S.Y.	128	ZUBOV, V.	226, 227, 232, 233, 262
ZASTENKER, G.N.	221, 222	ZHU, Y.	203, 204	ZUCCHERETTI, E.	219
ZATMAN, S.A.	133	ZHURBA, E.V.	192	ZUCHIEWICZ, W.	85
ZATSEPINA, O.Y.	118	ZHURBAS, V.M.	168	ZUIDEMA, P.	111
ZAULI SAJANI, S.	260	ZIAKOPOULOS, D.	179	ZUMBERGE, J.F.	134
ZAV'YALOV, D.D.	170	ZIEBIS, W.	200	ZUQUETTE, L.V.	149
ZAVALA-SANSON, L.	266	ZIEGERT, A.	77	ZURBUCHEN, T.H.	214
ZAVATARELLI, .	260	ZIEGLER, P.A.	73	ZVEREVA, I.M.	120, 121
ZAVATARELLI, M.	172, 198	ZIEHMANN, C.	257	ZVEREVA, I.M.	121
ZAVIALOV, P.	161, 162	ZIEMANN, A.	173-175	ZVIYAGINTSEV, A.M.	207
ZAWADZKI, I.	145	ZIEREIS, H.	196, 197, 233	ZWALLY, H.J.	170, 249
ZEBKER, H.	123	ZIERENBERG, R.	99	ZWEIGEL, P.	63
ZECHNER, E.	140	ZIGLINA, I.N.	248	ZWIERS, F.	203
ZEGERS, T.E.	99	ZIKRACH, E.K.	209	ZYRYANOV, V.N.	266



## 1999 General Assembly Den Haag, 19 - 23 April

Attend the open EGS Section/IWG Meetings on Wednesday, 22 April, 12.00-14.00, and make your suggestions to the scientific programme. Further information on the EGS Web Site at <http://www.copernicus.org/EGS/EGS.html>.



# Forthcoming Meetings

The following is a list of forthcoming meetings that may be of interest to EGS members. If you are organizing a meeting that should be included in future lists, please send us details including date, title, location and a contact name and address as soon as possible. Inclusion is free.

## 1998

May 11-15, 1998; **The Jovian System after Galileo, The Saturnian System before Cassini-Huygens**, Nantes, France. Details from: NANTES98, Laboratoire de Géophysique et Planétologie, Faculté des Sciences, 2 rue de la Houssinière, BP 92208, 44322 Nantes Cedex 3, France; Tel: +33-2-40373187, Fax: +33-2-40374948, E-mail: nantes98@chimie.univ-nantes.fr

May 11-15, 1998; **Symposium on Operational Remote Sensing for Sustainable Development**, Enschede, The Netherlands. Details from: EARSel Secretariat, Madeleine Godefroy, B-318, 2 avenue Rapp, F-7534-F-Paris Cedex 07, France; Tel: +33-1-45567360, Fax: +33-1-45567361, E-mail: earsel@meteo.fr

May 13-15, 1998; **Advances in Fluid Mechanics (AFM 98)**, Udine, Italy. Details from: P. Doughty-Young, AFM 98, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO4 7AA, United Kingdom; Details from: +44-1703-293-223, Fax: +44-1703-292-853, E-mail: paula@wessex.ac.uk

May 16-22, 1998; **Natural and Anthropogenically Induced Hazards**; Acquafredda di Maratea, Italy. Details from: Dr. Josip Hendekovic, European Science Foundation, 1 quai Lezay-Marnesia, 67080 Strasbourg Cedex, France; Tel: +11-388-767135, Fax: +33-388-366987, E-mail: euresco@esf.org, <http://www.esf.org/euresco>

May 17-22, 1998; **HAZARDS-98: 7th International Conference on Natural and Man-Made Hazards**, International Society for the Prevention and Mitigation of Natural Hazards; Chania, Crete Island, Greece. Details from: Dr. G.A. Papadopoulos, Institute of Geodynamics, National Observatory of Athens, 11810 Athens, Greece; Tel: +30-1-3462-664, Fax: +30-1-3426-005, E-mail: m.sachp@egelados.gein.noa.gr

May 18-20, 1998; **Joint Meeting of the Geological Association of Canada, Mineralogical Association of Canada, Association professionelles des Géologues et des Géophysiciens du Québec, Québec Congress Centre, Canada**. Details from: Agathe Morin, Dépt. de Géologie et de Génie Géologique, Université Laval, Pavillon Adrien-Pouliot, Sainte-Foy (Québec) G1K 7P4, Canada; Tel: +1-418-656-2193, Fax: +1-418-656-7339, E-mail: quebec1998@ggl.ulaval.ca; <http://www.ggl.ulaval.ca/quebec1998.html>

May 18-21, 1998; **5th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes**; Rhodes, Greece. Details from: John Bartzis, NCSR DEMOKRITOS, INTRP/Environmental Research Laboratory, 15310 Aghia Paraskevi Attikis, Greece; Tel: +30-1-652-5004, Fax: +30-1-653-3431, E-mail: Sharmo98@avra.nrps.ariadne-t.gr, <http://milos.nrps.ariadne-t.gr>

May 18-22, 1998; **International Symposium on Oceanic Fronts and Related Phenomena dedicated to the late Prof. Konstantin Fedorov**, St. Petersburg, Russia. Details from: Dr. A. Zatsepin, P.P. Shirshov Inst. of Oceanology, Russian Academy of Sciences, Nakhimovskii pr. 36, 117851 Moscow, Russia; Tel: +7-0995-124-7392, Fax: +7-095-124-5983, E-mail: zatsepin@glas.apc.org; <http://www.rc.msu.ru/ocfronts>

May 19-23, 1998; **International Coastal Symposium (ICS98)**, Coastal Education & Research Foundation (CERF) & Journal of Coastal Research (JCR), Palm Beach, Florida, USA. Details from: Challis Breithaupt, ICS98 Secretariat, 810 East 10th Street, Lawrence, KS 66044, USA; Tel: +1-785-843-1221, Fax: +1-785-843-1274; E-mail: am&m@allenpress.com or cfinkl@gate.net

May 20-21, 1998; **Response of the Earth's Lithosphere to Extension**, Royal Society, London, United Kingdom. Details from: Dr. R.B. Whitmarsh, Room 786/23, Challenger Seafloor Processes Division, Southampton Oceanography Centre, European Way, Southampton SO14 3ZH, United Kingdom; Tel: +44-1703-596-564, Fax: +44-1703-596-554, E-mail: bob.whitmarsh@soc.soton.ac.uk or rbw@socnet.soc.soton.ac.uk

May 20-22, 1998; **Stability and control of shear flows with strong temperature or density gradients**; Prague, Czech Republic. Details from: Dr. F. Marsik, Inst. of Thermomechanics, Academy of Sciences of the Czech Republic, Dolejskova 5, 182 00 Praha 8, Czech Republic; E-mail: marsik@bivoj.it.cas.cz

May 22-27, 1998; **Geochemistry of Crustal Fluids: Characterization of Reactive Transport in Natural Systems**, Aghia Pelaghia, Crete, Greece. Details from: Dr. J. Hendekovic, European Science Foundation, 1 quai Lezay-Marnesia, 67080 Strasbourg Cedex, France; Tel: +33-388-767135, Fax: +33-388-366987, E-mail: euresco@esf.org, <http://www.esf.org/euresco>

May 25-June 5, 1998; **NATO Advanced Study Institute on Energy Conservation through heat transfer enhancement of heat exchangers**, Cesme, Imir, Turkey. Details from: Prof. Dr. Faruk Arinc, Secretary General, ICHMT, Mechanical Engineering Department, Middle East Technical University, 06531 Ankara, Turkey; Fax: +90-312-210-1331, E-mail: arinc@metu.edu.tr, <http://ichmt.me.metu.edu.tr/announce/ASI/announce.html>

May 26-29, 1998; **AGU Spring Meeting**, Boston, Mass., USA. Details from: AGU, Meetings Dept., 2000 Florida Avenue NW, Washington DC 20009, USA; Tel: +1-202-462-6900, Fax: +1-202-328-0566, E-mail: meetings@kosmos.agu.org, <http://www.agu.org>

June 1-4, 1998; **The Oceanography Society (TOS) and IOC Meeting on Coastal and Marginal Seas**, UNESCO Headquarters, Paris, France. Details from: Judi Rhodes, TOS, 4052 Timber Ridge Drive, Virginia Beach, VA 23544, USA; Tel: +1-757-464-0131, Fax: +1-757-464-1759, E-mail: rhodesj@exis.net, <http://www.tos.org>

June 1-5, 1998; **International Symposium on Space Plasma Studies by In-Situ and Remote Measuring**, Space Research Institute Moscow, Russia. Details from: verigin@iki.rssi.ru

June 8-11, 1998; **The Eighth International Workshop on Atmospheric Icing of Structures (IWAIS'98)**, Reykjavik, Iceland. Details from: ITB-Congrex, Skogarhild 18, 101 Reykjavik, Iceland; Tel: +354-562-3300, Fax: +354-562-3345, E-mail: congrex@itb.is, <http://www.rarik.is/iwais98/>

June 8-11, 1998; **9th Global Warming International Conference, Expo & Executive Workshop**, Hong Kong, China. Details from: Global Warming International Center GWIC, Tel: +1-603-910-1551 or GW9 Conference Registration, SUPCON, PO Box 5275, Woodridge, IL, 60517-0275, USA; Fax: +1-630-910-1561

June 8-12, 1998; **Biotransport'98, International Symposium on Heat and Mass Transfer in Biological and Medical Engineering**, Kusadasi, Turkey. Details from: Kenneth R. Diller, Biomedical Engineering Program, The University of Texas at Austin, ENS 612 Austin, TX 78712-1084, USA; Tel: +1-512-471-7167, Fax: +1-512-471-0616, E-mail: kdiller@mail.utexas.edu

June 23 - July 2, 1998; **1998 Cambridge Symposium Workshop on the Physics of Space Plasmas**, Cascais, Portugal. Details from: T. Chang, Center for Theoretical Geo/Cosmo Plasma Physics, MIT Center for Space Research, 77 Massachusetts Ave. 37-271, Cambridge, MA 02139, USA; Tel: +1-617-253-7527, E-mail: tsc@space.mit.edu

June 29 - July 1, 1998; **Sixth International Conference on Precipitation: Predictability of Rainfall at the Various Scales**, Mauna Lani Bay, Kohala Coast, Hawaii. Details from: Prof. Roni Avissar, Department of Environmental Sciences, Rutgers University, New Brunswick, NJ 08903, Tel: +1-908-932-9520, Fax: +1-908-932-1038, E-mail: avissar@gaia.rutgers.edu or Prof. James Smith, Department of Civil Engineering and Operation Research, Princeton University, Princeton, NJ 08544, Tel: +1-609-258-4615, Fax: +1-609-258-2799, E-mail: jsmith@radap.princeton.edu

July 4-11, 1998; **Geological Society of America Penrose Conference: Processes of Crustal Differentiation: Crust-Mantle Interactions**, Verbania, Italy. Details from: T. Rushmer, Dept. of Geology, University of Vermont, Burlington, VT 05405, USA; Tel: +1-802-656-8136, Fax: +1-802-656-0045, E-mail: trushmer@zoo.uvm.edu

July 6-8, 1998; **1st International Conference on Geographical Information Systems in the Next Millennium (GIS98)**, Udine, Italy. Details from: L. Kerr, GIS98 Conference Secretariat, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, United Kingdom; Tel: +44-1703-393-223, Fax: +44-1703-292-853, E-mail: liz@wessex.ac.uk

July 6-10, 1998; **Hydrology in a Changing Environment**, Exeter, United Kingdom. Details from: B. Webb, Dept. of Geography, University of Exeter, Amory Bldg., Rennes Dr., Exeter, Devon EX4 4RJ, United Kingdom; Fax: +44-1392-263-342, E-mail: b.w.webb@exeter.ac.uk

July 6-10, 1998; **9th International Symposium on Acoustic Remote Sensing and Associated Techniques of the Atmosphere and Oceans**, Vienna, Austria. Details from: ISARS'98, c/o Institute of Meteorology and Physics, Türkenschanzstr. 18, 1180 Wien, Austria; Fax: +43-1-4705820-60, E-mail: isars@mail.boku.ac.at, <http://www.boku.ac.at/imp/isars/isars4.html>

July 6-10, 1998; **19th International Laser Radar Conference**, Annapolis, Maryland, USA. Details from: Dr. Syed Ismail, Chairman, 19th ILRC Program Committee, Langley Research Center, Mail Stop 401A, Hampton, Virginia 23665-5225, USA; E-mail: s.ismail@larc.nasa.gov or Dr. William Heaps, Chairman, 19th ILRC Organizing Committee, NASA/Goddard Space Flight Center, Code 916, Greenbelt, Maryland, USA; Fax: +1-301-286-1662, E-mail: heaps@aeolus.gsfc.nasa.gov

July 7-10, 1998; **4th International Interdisciplinary Conference on the Environment**, Washington, DC, USA. Details from: IEA/Kantarelis-Hickey, Assumption College, 500 Salisbury Street, Worcester, MA 01615, USA; Tel: +1-508-767-7557 or 7296, Fax: +1-508-767-7382, E-mail: dkantar@eve.assumption.edu or khickey@eve.assumption.edu

July 12-16, 1998; **Tenth IMDSP Workshop 98**, Alpbach, Austria. Details from: Prof. Dr.-Ing. Bernd Girod, Telecommunications Institute, University of Erlangen-Nuremberg, Cauerstrasse 7, 91058, Erlangen, Germany; E-mail: imdsp@nt.e-technik.uni-erlangen.de, <http://www.nt.e-technik.uni-erlangen.de/~imdsp>

July 12-19, 1998; **32nd COSPAR Scientific Assembly**, Nagoya, Japan. Details from: COSPAR Secretariat, 51, bd. de Montmorency, 75016 Paris, France; Tel: +33-1-45250679, Fax: +33-1-40509827, E-mail: cospar@paris7.jussieu.fr, <http://www.copernicus.org/COSPAR/COSPAR.html>

July 13-17, 1998; **NVAGA4 Nonlinear Variability in Geophysics and Astrophysics 4, EGS Richardson Conference**, Roscoff, France. Details from: <http://www.multifractal.jussieu.fr/~www/NVAGA4.html>

July 21-24, 1998; **Western Pacific Geophysics Meeting**, Taipei, Taiwan. Details from: AGU, 2000 Florida Avenue NW, Washington DC 20009, USA; Tel: +1-202-462-6900, Fax: +1-202-328-0566, <http://www.agu.org>

August 17-20, 1998; **International Glaciological Society Symposium on Glaciers and the Glaciated Landscape**, Kiruna, Sweden. Details from: C.S.L. Ommanney, International Glaciological Society, Lensfield Road, Cambridge CB2 1ER, United Kingdom; Tel: +44-1223-355-974, Fax: +44-1223-336-543

August 17-20, 1998; **Second International Conference on Climate and Water**, Espoo, Finland. Details from: Helsinki University of Technology, Water Res. Eng., Nea Helenius, Tekniikantie 12, 02150 Espoo, Finland, Fax: +358-9-451-38-27, E-mail: nheleniu@ahiti.hut.fi, <http://ahiti.hut.fi/wr/caw2>

August 17-21, 1998; **International Conference on Satellites, Oceanography and Society**, Lisbon, Portugal. Details from: D. Halpern, Jet Propulsion Laboratory, MS 300-323, California Institute of Technology, Pasadena, CA 91109-8099, USA; E-mail: halpern@pacific.jpl.nasa.gov

August 23-28, 1998; **6th International Conference on Palaeoceanography**, Lisbon, Portugal. Details from: F. Abrantes, Agencia Abreu S.A., Congress Dept., Av. 25 de Abril, @-Edificio Abreu, 2795 Linda-Velha, Portugal; Tel: +351-1-416-7200, Fax: +351-1-414-3058, e-mail: ovaia@abreu.pt

August 31-September 5, 1998; **6th biennial "Castle Meeting" on Paleo, Rock and Environmental Magnetism**, Castle "Hruba Skala", Czech Republic. Details from: E. Petrovsky, Geophysical Institute, Bocni II/1401, 14131 Praha 4, Czech Republic; Tel: +420-2-67103-333, Fax: +420-2-761549, E-mail: edp@ig.cas.cz

September 3, 1998; **V.M. Goldschmidt Conference**, Toulouse, France. Details from: J. Schott, Lab. de Geochimie, 38 rue des Trente Six Ponts, 31400 Toulouse, France; Tel: +33-561-556518, Fax: +33-561-520544, E-mail: goldconf@lucid.ups-tlse.fr

September 3-6, 1998; **Euroconference on Earth Stress and Industry - The World Stress Map and Beyond**, Heidelberg, Germany. Details from: WSM Euroconference Office, Geophysical Institute, University of Karlsruhe, Hertzstr. 16, 76187 Karlsruhe, Germany; Fax: +49-721-71173, E-mail: wsm@gpiwpl.physik.uni-karlsruhe.de, <http://www-gpi.physik.uni-karlsruhe.de/pub/wsm/>

September 7-9, 1998; **Recent Trends in Cosmochemistry**, Mainz, Germany. Details from: Heide Prager, Abt. Kosmochemie, Max-Planck-Institut für Chemie, P.O. Box 3060, 55020 Mainz, Germany; Tel: +49-6131-305231, Fax: +49-6131-371290, E-mail: prager@mpch-mainz.mpg.de

September 8-12, 1998; **International Conference on Coastal Ocean and Semi-Enclosed Seas Circulation and Ecology Modelling and Monitoring**, Moscow, Russia. Details from: Prof. V.V. Zhmur, P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences, Moscow, Russia; Fax: +7-095-124-5983, E-mail: zhmur@tiki.sio.rssi.ru

September 15-17, 1998; **Fourth International Symposium and Exhibition on Environmental Contamination in Central and Eastern Europe**, Warsaw, Poland. Details from: E.B. Jones, Institute for Central and Eastern European Cooperative Environmental Research, Florida State University, 2035 East Paul Dirac Dr., Morgan Building (226), Tallahassee, FL 32310-3700, USA; Tel: +1-904-644-5524, Fax: +1-904-574-6704, E-mail: warsaw98@mailers.fsu.edu

September 19-22, 1998; **International Ocean Drilling Forum**, Edinburgh, United Kingdom. Details from: Mrs. L. Marshall, Conference Secretary, Dept. of Geology and Geophysics, Edinburgh University, West Mains Rd. Edinburgh EH9 3JW, United Kingdom; Tel: +44-131-860-8546, Fax: +44-131-668-3184, E-mail: l.marshall@glg.ed.ac.uk

September 20-25, 1998; **8th International Symposium on Deep Seismic Profiling of the Continents and their Margins**; Platja d'Aro Conference Centre, Barcelona, Spain. Details from: 8th International Symposium on Deep Seismic Profiling of the Continents and their Margins, Institute of Earth Sciences (J. Almera) - CSIC, Lluís Solé Sabarís s/n, E-08028 Barcelona, Spain; Fax: +34-3-411-0012, E-mail: seismix98@ija.csic.es, WWW <http://caribe.ija.csic.es/seismix98/fcirt.html>

September 21-25, 1998; **International Conference and Special Workshop on Groundwater Quality: Remediation and Protection**, Tübingen, Germany. Details from: Conference Secretariat GQ'98, c/o Lehrstuhl für Angewandte Geologie, Sigwartstr. 10, 72076 Tübingen, Germany; Tel: +49-7071-2974692, Fax: +49-7071-5059, E-mail: mike.herbert@uni.tuebingen.de

September 21-25, 1998; **Oceanography of the Adriatic Sea**, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy. Details from: <http://www.oc.nps.navy.mil/~poulain/workshop/intro.html> for benoit.cushman-roisin@dartmouth.edu

September 23-30, 1998; **2nd GKSS School on Environmental Research: Models in Environmental Research**, Lauenburg (50 km east of Hamburg), Germany. Details from: Götz Flöser, GKSS Forschungszentrum, Max-Planck-Str. D-21502 Geesthacht, Germany; Tel: +49-4152-871834, Fax: +49-4152-871888, E-mail: floeser@gkss.de; WWW <http://w3g.gkss.de/hgf/2ndschool.html>

September 28 - October 1, 1998; **OCEANS'98, Engineering for Sustainable Use of the Oceans**, Nice, France. Details from: Thomson Marconi Sonar, OCEANS'98, 525 Route des Dolines, BP 157, 06903 Sophia-Antipolis, France; Tel: +33-492964469, Fax: +33-492963925, E-mail: g.bienvenu@ieee.org

September 28 - October 2, 1998; **Twenty-third NATO/CCMS International Technical Meeting on Air Pollution Modelling and its Application**, Riviera (near Varna), Bulgaria. Details from: Sven-Erik Gryning, Wind Energy and Atmospheric Physics Dept., Risø National Laboratory, DK-4000 Roskilde, Denmark; Fax: +45-4677-5970, E-mail: svenerik.gryning@risoe.dk, conference Internet address: [www.risoe.dk/amv.itm](http://www.risoe.dk/amv.itm)

October 3-8, 1998; **Natural Waters and Water Technology: Catalytic Science and Technology for Water**, Acquafredda di Maratea, Italy. Details from: Dr. J. Hendekovic, European Science Foundation, 1 quai Lezay-Marnesia, 67080 Strasbourg Cedex, France; Tel: +33-388-767135, Fax: +33 388 366987, E-mail: euresco@esf.org, <http://www.esf.org/euresco>

October 20-22, 1998; **Workshop on Space Exploration and Resources Exploitation (ExploSpace), Engineering and Economic Aspects into the 21st Century**, Sardinia, Italy. Details from: ESTEC Conference Bureau, P.O. Box 299, 2200 AG Noordwijk, The Netherlands; Fax: +31-71-565-5658, E-mail: confburo@estec.esa.nl

December 6-10, 1998; **AGU Fall Meeting**, San Francisco, CA, USA. Details from: AGU, Meetings Dept., 2000 Florida Avenue NW, Washington DC 20009, USA; Tel: +1-202-462-6900, Fax: +1-202-328-0566, E-mail: meetings@kosmos.agu.org, <http://www.agu.org>

## 1999

April 19-23, 1999; **European Geophysical Society XXIV General Assembly**, Den Haag, The Netherlands. Details from: EGS Office, Max-Planck-Str. 13, 37191 Katlenburg-Lindau, Germany; Tel: +49-5556-1440, Fax: +49-5556-4709, E-mail: EGS@COPERNICUS.ORG, <http://www.copernicus.org/EGS/EGS.html>

April 19-23, 1999; **ICHMT's 2nd International Symposium on Heat and Mass Transfer under Plasma Conditions**, Antalya, Turkey. Details from: Prof. Dr. Faruk Arinc, Mechanical Engineering Dept., Middle East Technical University, 06531 Ankara, Turkey; Fax: +90-312-210-1332, e-mail: arinc@metu.edu.tr, <http://ichmt.me.metu.edu.tr>

August 3-11, 1999; **XV International Congress on "The Environmental Background to Hominid Evolution in Africa"**, Durban, South Africa. Details from: Dr. D. Margaret Avery, INQUA XV CONGRESS, P.O. Box 61, South Africa Museum, Cape Town, 8000, South Africa, Tel: +27-21-243-330, Fax: +27-21-246-716, E-mail: mavery@samuseum.ac.za

## 2000

April 3-7, 2000; **Millennium Conference on Earth, Planetary and Solar System Sciences, European Geophysical Society XXV General Assembly**, Florence, Italy. Details from: EGS Office, Max-Planck-Str. 13, 37191 Katlenburg-Lindau, Germany; Tel: +49-5556-1440, Fax: +49-5556-4709, E-mail: EGS@COPERNICUS.ORG, <http://www.copernicus.org/EGS/EGS.html>

## 2001

April 2-6, 2001; **European Geophysical Society XXVI General Assembly**, Vienna, Austria. Details from: EGS Office, Max-Planck-Str. 13, 37191 Katlenburg-Lindau, Germany; Tel: +49-5556-1440, Fax: +49-5556-4709, E-mail: EGS@COPERNICUS.ORG, <http://www.copernicus.org/EGS/EGS.html>

# Information about the Society

## General Information

Founded in 1971, the European Geophysical Society (EGS) has developed into a dynamic, international, multi- and interdisciplinary forum for the geophysics community in Europe and throughout the world. In furtherance of its aims to promote geo- and space-sciences on a pan-European, international level, the Society

- ☆ organizes annual international General Assemblies at different venues in Europe normally in April. These assemblies have become the largest annual conferences in geo- and space-sciences held in Europe today.
- ☆ organizes smaller Topical Conferences in cooperation with other scientific organizers or organizing committees and societies.
- ☆ offers a substantial Membership Benefit Programme, including the quarterly issues of Newsletter and reduced concession rates for an increasing number of internationally known journals and publications.
- ☆ provides an increasing number of refereed, international, Scientific Journals for the publication of short communications, original contributions and review articles in all geophysical disciplines. There are no page or handling charges and reprints are, in general, free. There are also excellent concession rates for EGS members.
- ☆ publishes four Book Series of worldwide distribution at 30% discount for EGS members with guaranteed high royalties for authors.
- ☆ maintains a close liaison to a number of European scientific societies and organizations, such as, e.g., the Austrian Society for Meteorology, the British Hydrological Society, the Canadian Geophysical Union, the Challenger Society for Marine Science, the Deutsche Meteorologische Gesellschaft, the Geophysical Section of the Czech Union of Mathematicians and Physicists, the Geophysical Society of Finland, the Nordisk Hydrologisk Forening, the Royal Astronomical Society, the Société Royale Belge d'Astronomie, de Météorologie et de Physique du Globe, the Swiss Specialist Group of Geophysicists.
- ☆ promotes, in particular, the Young Scientists in Europe, e.g. by the Young Scientists' Travel Award, the Young Scientists' Publication Award or by further reductions in their membership and conference fees and membership subscription rates.
- ☆ helps also the Young Scientists in North America to attend its General Assemblies by providing the Keith Runcorn Travel Award.
- ☆ supports East-European Scientists, e.g. by providing free copies of *Annales Geophysicae* to the main research institutes, by making the East European Support Award to assist their participation in the General Assemblies, by including all summaries free of charge in the Book of Abstracts (*Annales Geophysicae Supplement*) for each General Assembly, and by careful editing of manuscripts submitted for publication.

☆ maintains a special Award Programme, including Society Awards, such as Honorary Membership and the EGS Badge Award, as well as Section Awards, such as the Young Scientists' Publication Award and the Louis Néel, the Beno Gutenberg, the Fridtjof Nansen, the Vilhelm Bjerknes, the Milutin Milanković, the Julius Barrels, the David Bates and the Sergey Soloviev Medals.

☆ organizes all scientific activities in a most liberal and democratic way through Sections and Interdisciplinary Working Groups.

## EGS Membership

**Membership** of the EGS is by payment of an annual membership fee and is open to individuals or organizations professionally engaged in or associated with geophysics and related studies.

**Regular Membership** is available to individuals. Those applying for student dues should enclose a certificate of their student status.

**Emeritus Scientist Membership** is available to individuals, who have formally left their official scientific positions.

**Affiliated & Corporate Membership** is available to individuals belonging to a department, laboratory or institute or by members belonging to an academy, society or union either individually through their organization as an affiliated member (1/3 reduction) or en-bloc as corporate members (2/3 reduction).

**Life-Time Membership** is available to individuals by a one time payment in lieu of annual dues.

All participants in the XXII General Assembly that will register at the full meeting Non EGS Membership/Non EGS Student Membership fee will automatically become Member/Student Member of the Society for 1997.

**Membership** is on a calendar year basis. Membership applications received after 1 October will be made effective as of 1 January of the following year, unless otherwise requested. Annual invoices requesting payment of membership fees and subscription to EGS journals are sent out at the end of the preceding year.

## EGS Awards

Members of the EGS may propose appropriate candidates for the following Society Awards and Medals to the EGS Office at any time. Any proposal/application should be supported by at least two, independent colleagues, and it will be reviewed by the EGS Awards' Committees and independent referees. Deadline for any proposal is 31 December.

### 1. Honorary Membership (since 1973)

Honorary Membership is the most prestigious award made by the Society. It is reserved for scientists who have achieved exceptional international standing in geophysics, defined in its widest sense.

### 2. EGS Badge Award (since 1988)

This award is reserved for individuals in recognition of their outstanding service and/or exceptional efforts in the promotion, growth and running of the Society.

### **3. Young Scientists' Publication Award** *(since 1990)*

These awards are made to the younger and more recently established scientists in the geophysical disciplines in recognition of their outstanding contributions to the EGS scientific journals. Each Section may bestow one award each year.

### **4. Louis Néel Medal** *(since 1993)*

This medal has been established by the Section on Solid Earth Geophysics (SE) in recognition of the scientific achievements of Louis Eugène Felix Néel, who shared the 1970 Nobel Prize of Physics for his fundamental research and discoveries concerning antiferromagnetism. This medal is reserved for individuals in recognition of outstanding achievements in the fertilization of the Earth Sciences by the transfer and application of fundamental theory and/or experimental techniques of solid state physics, as defined in its broadest sense.

### **5. Stephan Mueller Medal** *(since 1997)*

This medal has been established by the Section on Solid Earth Geophysics (SE) in recognition of the scientific and editorial achievements of Stephan Mueller, "Founding Father", President, Honorary Member, Badge Awardee and Editor-in-Chief of the European Geophysical Society, for exceptional contributions to Tectonics and Lithospheric Geophysics.

### **6. Beno Gutenberg Medal** *(since 1996)*

This medal has been established by the Section on Solid Earth Geophysics (SE) in recognition of the scientific achievements of Beno Gutenberg. It is reserved for individuals in recognition of their outstanding contributions to Seismology.

### **7. Vening Meinesz Medal** *(since 1997)*

This medal has been established by the Section on Geodesy (G) in recognition of the scientific achievements of Vening Meinesz. It is reserved for distinguished research in Geodesy in general.

### **8. John Dalton Medal** *(since 1997)*

This medal has been established by the Section on Hydrological Sciences (HS) in recognition of the scientific achievements of John Dalton. It will be awarded by the European Geophysical Society for distinguished research in Hydrology viewed as an Earth science.

### **9. Fridtjof Nansen Medal** *(since 1996)*

This medal has been established by the Section on Oceans and Atmosphere (OA) in recognition of the scientific achievements of Fridtjof Nansen. It will be awarded by the European Geophysical Society for distinguished research in Oceanography.

### **10. Vilhelm Bjerknes Medal** *(since 1995)*

This medal has been established by the Section on Oceans and Atmosphere (OA) in recognition of the scientific achievements of Vilhelm Bjerknes. It is reserved for distinguished research in Atmospheric Sciences.

### **11. Milutin Milankovitch Medal** *(since 1993)*

This medal has been established by the Section on Oceans & Atmosphere (OA) in recognition of the scientific and editorial achievements of Milutin Milankovitch. This medal is reserved for scientists for their outstanding achievements in Climatological Sciences.

### **12. Julius Bartels Medal** *(since 1996)*

This medal has been established by the Section on Solar-Terrestrial Sciences (ST) in recognition of the scientific achievement of Julius Bartels. It is reserved for outstanding research in Solar-Terrestrial Sciences.

### **13. David Robert Bates Medal** *(since 1992)*

This medal has been established by the Section on Planetary & Solar System Sciences (PS) in recognition of the scientific and editorial achievements of Sir David Robert Bates FRS. It is reserved for scientists for their exceptional contributions to Planetary and Solar System Sciences.

### **14. Hannes Alfvén Medal** *(since 1997)*

This medal has been established by the Sections on Solar Terrestrial Sciences (ST) and Planetary Sciences (PS) in recognition of the scientific achievements of Hannes Alfvén, and it is awarded for outstanding scientific contributions towards the understanding of plasma processes in the solar system and other cosmical plasma environments.

### **15. Sergey Soloviev Medal** *(since 1996)*

This medal has been established by the Interdisciplinary Working Group (IWG) on Natural Hazards (NH) in recognition of the scientific achievement of Sergey Soloviev. It is reserved for scientists for their exceptional contributions to natural hazards, in particular, for their research aiming at an improvement of our knowledge of basic principles as well as for the assessment and proper mitigation of hazards in view of environmental protection and the integrity of human life and socio-economic systems.

### **16. Young Scientists' Travel Award** *(since 1977)*

These awards are intended to help young European scientists or young scientists working in Europe to attend the scientific conferences of the Society by providing a financial contribution to the cost of travel of max. 500 Swiss France & free registration.

### **17. Keith Runcorn Travel Award** *(since 1997)*

These awards are intended to assist a limited number of young American scientists to attend the General Assemblies of the Society by providing a financial support to their travel expenditures of max. 500 US\$ & free registration.

### **18. East European Support Award** *(since 1989)*

These awards are intended to help scientists from the countries in East-Europe to attend the scientific conferences of the Society by covering health insurance, local travel costs, conference fees, accommodation costs, and some modest amount for daily expenses.

# EGS Officers 1998-2000

## I. Council

President:	S. Cloetingh
Past-President	H. Wänke
General Secretary:	M. Rycroft
Treasurer:	M. Hapgood
Executive Secretary:	A.K. Richter
President of Section SE:	R. Sabadini
President of Section G:	S. Zerbini
President of Section HS:	H. Savenije
President of Section OA:	N.O. Jensen
President of Section ST:	P. Fabian
President of Section PS:	G. Neukum

## II. IWG Chairpersons

Chairman of IWG NP:	P. Read
Chairman of IWG NH:	F. Siccardi

## III. Sections and Sub-Sections

### Section I: Solid Earth Geophysics (SE)

President:	R. Sabadini
Sub-Sections' Secretaries:	
1. Tectonophysics	TBD
2. Seismology	W. Rabbel
3. Volcanology, Geochemistry & Petrology	P. Jakes
4. Palaeomagnetism & Rock Magnetism	V. Hoffmann
5. Potential Fields	W. Jacoby
6. Environmental Geophysics	S. Papamarinopoulos
7. Physical Properties of Geomaterials	J.L. Urai
8. Electromagnetism	V. Haak
9. Marine Geophysics	J.J. Dañoibeitia

### Section II: Geodesy (G)

President:	S. Zerbini
Sub-Sections' Secretaries:	
1. Earth's gravity field and its temporal variations	B. Richter
2. 3D coordinates and their temporal variations	H.-G. Kahle
3. Satellite Orbits	R. Noomen
4. Monitoring the ocean, ice and terrain surface	P. Knudsen
5. Geodetic aspects of global change phenomena	H.-P. Plag
6. Interactions between soil, Earth, oceans and atmosphere	A. Geiger
7. Geodetic methodology	I.N. Tziavos
8. Earth's rotation	B. Kolaczek

### Section III: Hydrological Sciences (HS)

President:	H. Savenije
Section A: Hydrology and Earth System Sciences	
Chairman:	J.P. O'Kane
1. Hydrology of the Earth's crust	R. McKay
2. Hydrology of landforms and fluvial processes	S. White
3. Hydrology & climate	J. Corte-Real
4. Hydrology & weather	P. Burlando
5. Hydrology of surface processes	G. Kiely
6. Hydrology & soil processes	W. Durner
7. Hydrology & living communities	TBD

8. Hydrology & chemical processes	P. Grathwohl
9. Hydrology & appl. mathematics	R. Rosso

### Section B: Hydrology and Water Resources

Chairman:	TBD
1. Water Resources Research	G. Blöschl
2. Water Resources Engineering and Management	M. Bruen

### Section IV: Oceans and Atmosphere (OA)

President:	N.O. Jensen
Sub-Sections' Secretaries:	
1. Oceanography	K. Richards
2. Meteorology	J.R. Bates
3. Climatology	H. LeTreut
4. Ocean & atmospheric chemistry	G. Le Bras
5. Glaciology	L. Braun
6. Applied oceanography	D. Prandle
7. Applied meteorology	P. Bessemoulin
Bulletin Board Manager	D. Stevens
	d.stevens@uea.ac.uk

### Section V: Solar-Terrestrial Sciences (ST)

Vice-President:	P. Fabian
Sub-Sections' Secretaries:	
1. Dynamics of the Middle Atmosphere	M. Dameris
2. Chemistry of the Middle Atmosphere	B. Krüger
3. Ionosphere and Thermosphere	D. Fontaine
4. Magnetosphere	M. Rycroft
5. Heliospheric Physics	R. Marsden
6. Solar Physics	B. Foing

### Section VI: Planetary & Solar System Sciences (PS)

Vice-President:	G. Neukum
Sub-Sections' Secretaries:	
1. Cosmochemistry	G. Kurat
2. Small Bodies, Dust and Rings	G. Schwehm
3. Terrestrial Planets and Satellites	P. Janle
4. Outer Planets	A. Coustenis
5. Atmospheres	S. Lewis
6. Magnetospheres and Ionospheres	R. Prangé
7. Exobiology	G. Horneck

### IWG I: Nonlinear Processes in Geophysics (NP)

Chairman:	P. Read
Sub-Groups' Vice-Chairmen:	
1. Scaling and Multifractals	D. Schertzer
2. Chaos and Nonlinear Time Series Analysis	L.A. Smith
3. Turbulence and Diffusion	B. Legras
4. Nonlinear Waves and Coherent Structures	S.S. Moiseev

### IWG II: Natural Hazards (NH)

Chairman:	F. Siccardi
Sub-Groups' Vice-Chairmen:	
1. Hydrological Hazards	L. Garrote
2. Volcanological Hazards	G. Macedonio
3. Landsliding Hazards	F. Guzzetti
Bulletin Board Manager	F. Guzzetti
	f.guzzetti@irpi.pg.cnr.it

# NICE ACROPOLIS - Les Muses - Level 3

## Posters OA

### Oceans and Atmosphere OA

#### 1. Deep Sea Oceanography

OA1 OA001-OA029 WE  
OA2 OA030-OA033 TH  
OA6 OA34-OA52 TU  
OA7 OA053-OA062 TH

#### 2. Regional Scale Oceanography

OA4 OA063-OA074 TH  
OA5 OA078-OA100 TU  
OA8 OA101-OA118 TU

#### 3. Applied Oceanography

OA23 OA119-OA131 WE  
OA24 OA132-OA142 TH

#### 4. Ocean-Atmosphere Coupling

OA3 OA143-OA156 TH  
OA14 OA157-OA170D TH

#### 5. Climate Variability

OA17 OA171-OA216 WE

### Video Demonstrations

Presentations are scheduled during corresponding poster sessions.

#### Tuesday, 21 April

17.00-17.30 OA5  
MELSOM, A.  
Ocean circulation in Vestfjorden (Video)

#### Wednesday, 22 April

17.00-17.30 OA1  
GARZOLI, S.L.;  
RICHARDSON, P.;  
DUNCOMBE RAE, C.;  
FRATANTONI, D.; GONI, G.  
Benguela current experiment (Video)

### 6. Atmospheric Boundary Layer

OA9 OA217-OA225 TH  
OA10 OA226-OA262 TH  
OA11 OA263-OA275 TU  
OA13 OA276-OA292 TH

### 7. Clouds

OA15 OA293-OA308 TH

### 8. Weather Forecasting & Predictability

OA12 OA309-OA318 TU  
OA25 OA319-OA325 TU  
OA26 OA326-OA328 TU

### 9. Atmospheric Chemistry

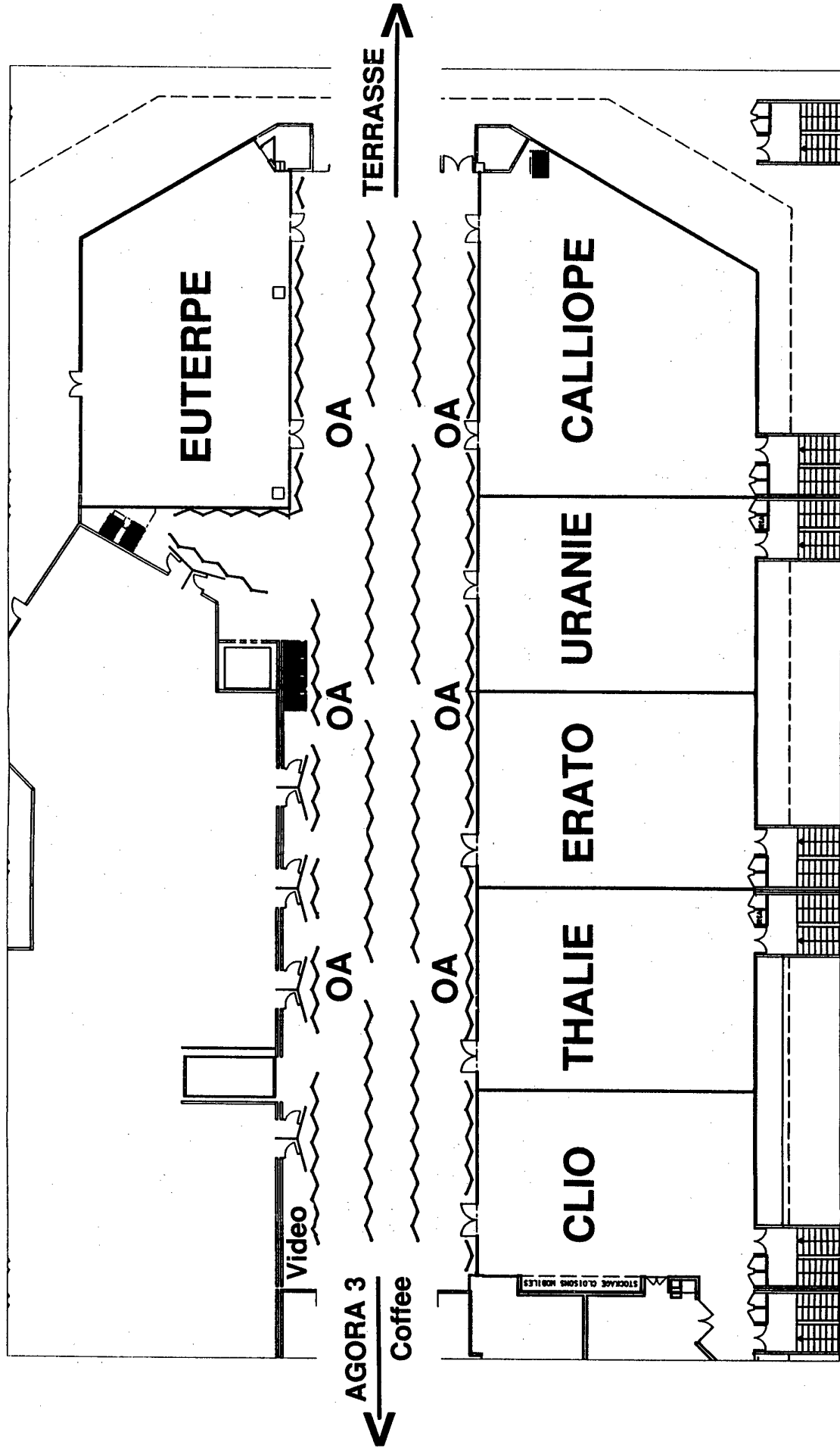
OA16 OA329-OA339 TU  
OA18 OA340-OA362 TH  
OA19 OA363-OA386 TU

### 10. Marine Chemistry

OA21 OA387-OA397 TU  
OA22 OA398-OA399 TH  
OA27 OA400-OA426 TH

# NICE ACROPOLIS - Les Muses - Level 3

## Sessions & Posters OA





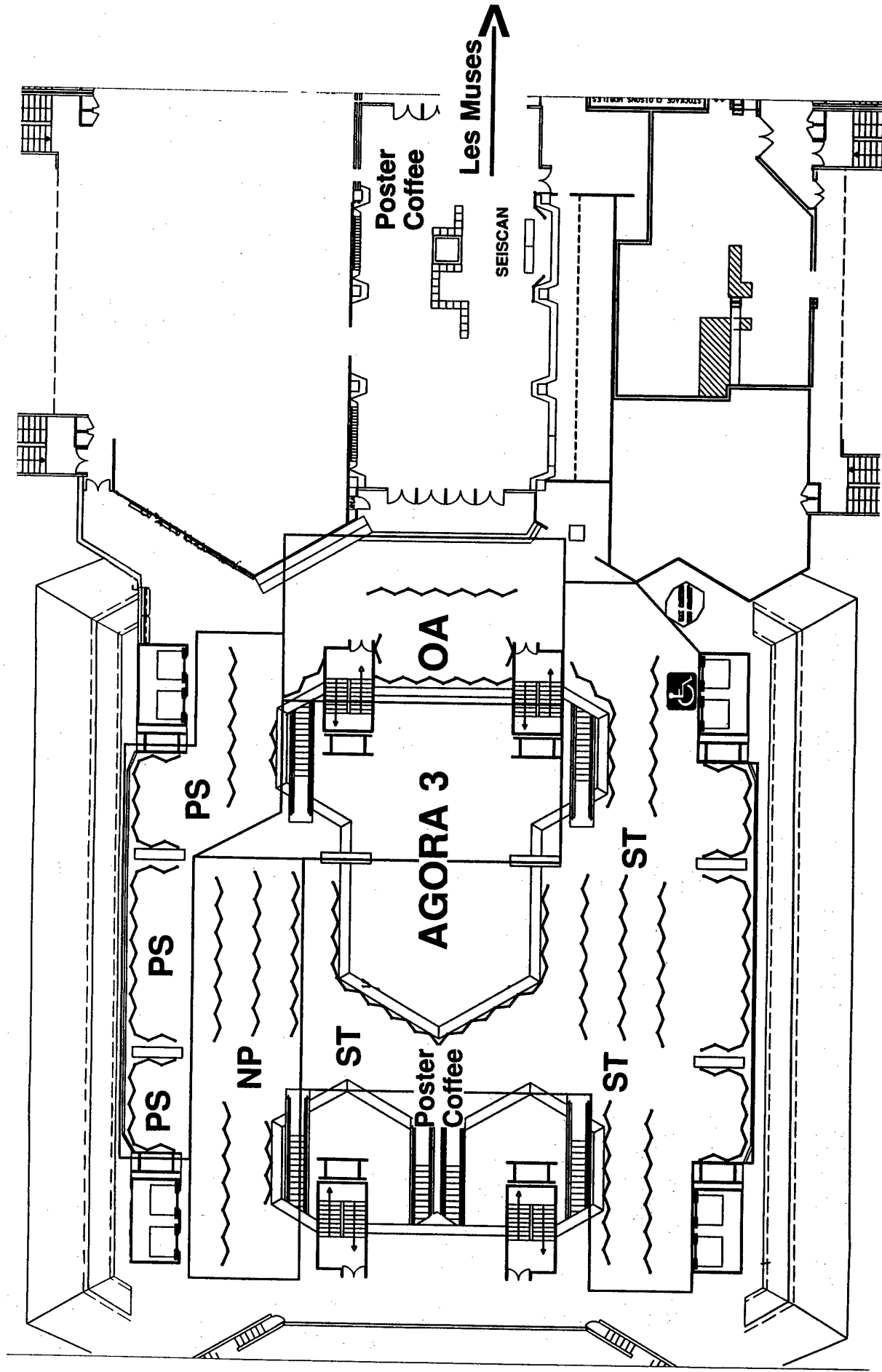
# NICE ACROPOLIS - AGORA 3 - Level 3

## Posters ST, PS & NP

Solar-Terrestrial Sciences ST	Planetary and Solar System Sciences PS	Nonlinear Processes in Geophysics NP
<b>1. Middle Atmosphere</b> ST1 ST001-ST002A TU ST2 ST003-ST018 TU ST15.1 ST019-ST028A TH ST15.2 ST029-ST036 TH ST15.3 ST037-ST048A TH ST15.4 ST049-ST066A TH ST17.1 ST067-ST076 TU ST17.2 ST077-ST090A TU	<b>1. Interior &amp; Surface</b> PS1 PS001-PS002 TH PS2 PS003-PS020 TU PS9 PS021-PS026 TH  <b>2. Atmospheres etc.</b> PS3 PS035-PS041 WE PS4 PS042-PS046 TH  <b>3. Mars Pathfinder</b> PS13 PS027-PS034 TU	<b>1. Multifractals</b> NP1.1 NP001-NP006 TU NP1.2 NP007-NP014 TU NP1.3 NP015-NP021 TU NP1.4 NP022-NP022A TU  <b>2. Time Series Analysis</b> NP2.1 NP023-NP028 WE NP2.2 NP029-NP030 WE NP2.3 NP031-NP038 WE
<b>2. Ionosphere</b> ST3 ST091-ST136 TH ST7 ST137-ST142 WE ST8 ST143-ST146 TU ST9 ST147-ST154 TU ST10 ST155-ST168A TH	<b>4. ISO Observations</b> PS5 PS047-PS050 TH PS11 PS051-PS062 TU  <b>5. Extra-solar planets</b> PS12 PS063-PS066 WE	<b>3. Geophysical Flows</b> NP3.1 NP039-NP045 TU NP3.2 NP046-NP054 WE NP3.3 NP055-NP059 TU NP3.4 NP060-NP064 TH NP3.5 NP065-NP078D TH
<b>3. Magnetosphere</b> ST4 ST169-ST180 TH ST11 ST181-ST192E WE	<b>6. Laboratory studies</b> PS7 PS067-PS074 WE	<b>4. Waves</b> NP4.1 NP079-NP090 TH NP4.2 NP091-NP092 TH NP4.3 NP093-NP097 TU NP5 NP098-NP102 TH
<b>4. Sun &amp; Heliosphere</b> ST5 ST193-ST206A TU ST6 ST207-ST210 TU ST12 ST211-ST218 TH ST13.2 ST219-ST224 WE		

# NICE ACROPOLIS - AGORA 3 - Level 3

## Posters ST, PS & NP



# NICE ACROPOLIS - Rhodes & Athéna - Level 2

## Posters SE & NH

### Solid Earth Geophysics SE

#### 1. Lithospheric Structure & Evolution

EGS1.2	SE001-SE011	WE
SE5	SE012-SE030	WE
SE10	SE031-SE033	TU
SE11	SE034-SE038	TU
SE14	SE039-SE048	WE
SE15	SE049-SE050B	TU
SE16	SE051-SE058	TH
SE19	SE059-SE067	TU
SE20	SE068-SE080	TH
SE22	SE081-SE090	TU
SE23	SE091-SE102	TH

#### 2. Seismicity & Seismotectonics

EGS1.3	SE103-SE109	TH
SE13	SE110-SE117B	TH
SE21	SE118-SE124	TH
SE25	SE125-SE132	TH

#### 3. General Tectonophysics

SE1	SE133-SE136	TU
SE17.1	SE137-SE148	TH
SE17.2	SE149-SE150	TU
SE17.3	SE151-SE155	TU

#### 4. Earth's mantle & core

SE2	SE156-SE165	TH
SE7	SE166-SE168	TU

#### 5. Earthquakes

SE24	SE169-SE175	TU
SE24.1	SE176-SE191	TU
SE27	SE192-SE194	TH

#### 6. Volcanology, Geochemistry & Petrology

SE31	SE195-SE200	TU
SE33	SE201-SE204	TH

#### 7. Magnetism

SE34.1	SE205-SE228	TU
SE34.2	SE229-SE246	TH
SE34.3	SE247-SE251	TU
SE34.4	SE252-SE261	WE

SE34.5 SE262-SE265 TH

SE34.6 SE266-SE270 TH

SE35.1 SE271-SE282 TU

SE35.2 SE283-SE284 TU

#### 8. Potentiel fields

SE36 SE285-SE300 TU

#### 9. Geophysical & Geological Data

EGS2	SE301-SE304	TU
EGS3	SE305-SE313	TU
SE6	SE314-SE320	TU
SE8	SE321-SE338C	TH
SE12	SE339-SE341	TH
SE52	SE342-SE352C	TU

#### 10. Regional studies

SE37	SE353-SE358	TH
SE43	SE359-SE370	TH
SE44	SE371-SE376	TH

#### 11. Geomaterials

SE39.1	SE377-SE391C	WE
SE39.2	SE392-SE401	TH
SE39.3	SE402-SE405A	TH
SE39.6	SE406-SE410	WE
SE41	SE411-SE414	TU

#### 12. Marine Geophysics

SE46	SE415-SE440A	WE
SE47.1	SE441-SE446	TU
SE48	SE447-SE462	TH
SE50	SE463-SE468	WE
SE51	SE469-SE474	TH

#### Natural Hazards NH

##### 1. Meteorological & hydrological hazards

NH2 NH001-NH022 WE

##### 2. Landslides, volcanoes & tsunamis

NH1	NH023-NH030	WE
NH3.5	NH031-NH042A	TH
NH4	NH043-NH048	TH
NH5	NH049-NH058B	TH

### 3. Earthquake risk mitigation

NH3.1	NH059-NH067	TU
NH3.4	NH068-NH070	TU
NH3.2	NH071-NH081A	TH
NH3.3	NH082-NH095	TH
NH3.7	NH096-NH104	TH

### Video & PC Demonstrations

Presentations are scheduled during corresponding poster sessions.

#### Tuesday, 21 April

17.00	NH6
	RUBBIA RINALDI, G.; PADULA, M.; ROTA, D.; ZERGA, A.
17.30	Information dissemination for the seismicity of Italian area through the GNDT web site (PC demo)
	CARDINALI, M.; GUZZETTI, F.; REICHENBACH, P.; TONELLI, G.

Conveying scientific information to the users: the experience of the GNDCI information delivery system (PC demo)

#### Wednesday, 22 April

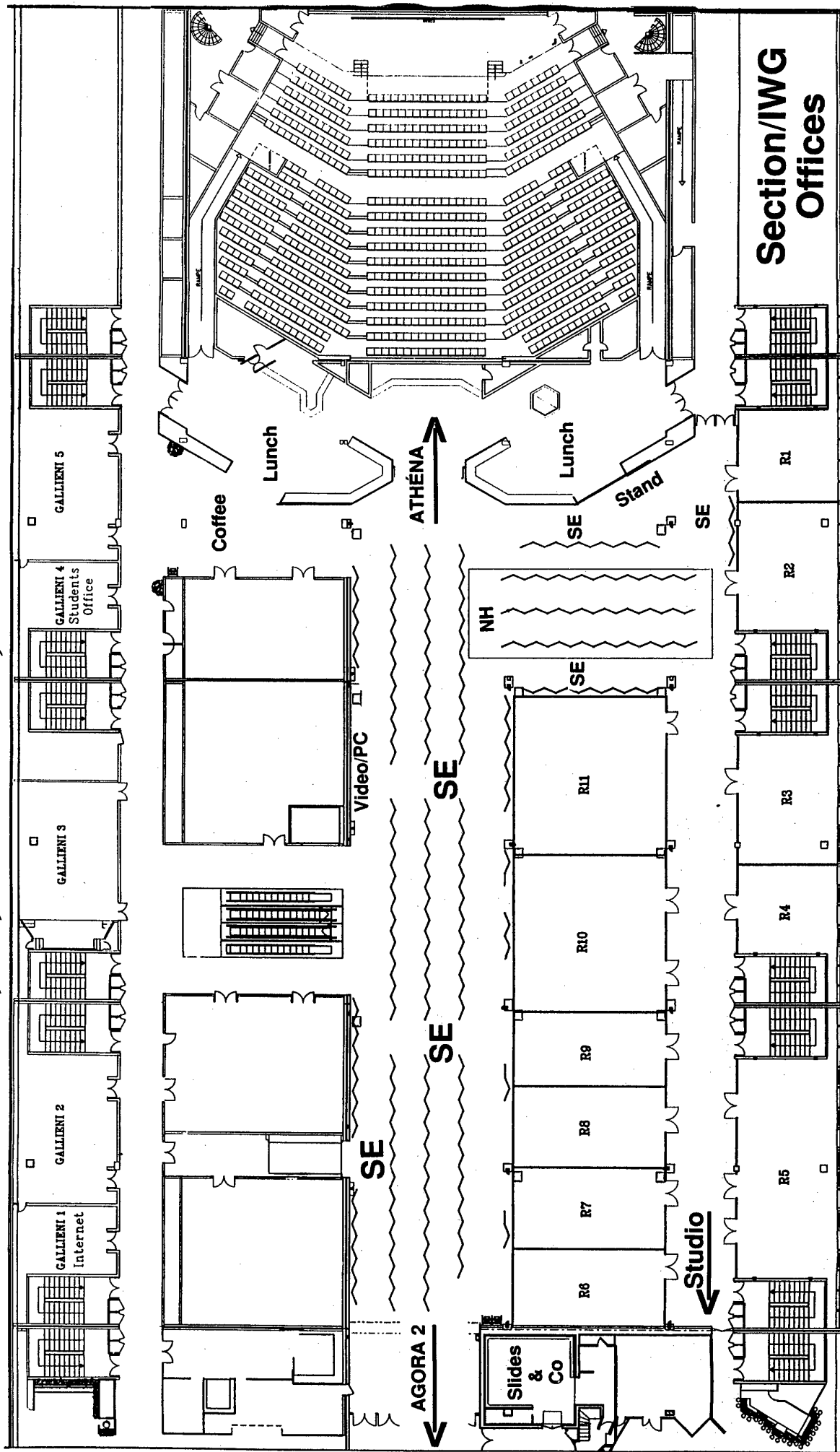
17.30	NH2.4
	BOVO, S.; ROSSINO, M.; RAVA, M.
18.00	The natural risk situation hall (Video)
	STELLING, G.S.; KERNKAMP, H.W.J.; LAGUZZI, M.M.
	Delft flooding system: two-dimensional hydrodynamic flooding simulation. A powerful tool for landscape planning and risk evaluation (Video)

#### Thursday, 23 April

17.00	SE43
	BERNARD, T.; TRESSOLS, F.
	New approach in 3D VLF-EM data representation: exact location of cavities in karst formations from field survey (PC demo)

# NICE ACROPOLIS - Rhodes & Athéna - Level 2

## Sessions SE, G, HS & NH, Posters SE & NH



# NICE ACROPOLIS - AGORA 2/Mykonos/Hermes - Level 2

## Posters G & HS

### Geodesy G

#### 1. Challenges in Geodesy

G6 G001  
G9 G002-G004  
G10 G005-G007  
G15 G008-G016

TH  
TH  
TH  
TU

#### 2. Networks and CEI

G14 G017-G027  
G16 G028-G046G

TU  
TU

#### 3. Modelling

G4 G047-G054  
G5 G055-G069A  
G11 G070-G075  
G12 G076-G080B

TH  
TH  
TU  
TH

#### 4. Miscellaneous

G1 G081-G082  
G3 G083-G088

TU  
TU

### Video Demonstrations

Presentations are scheduled during corresponding poster sessions.

#### Wednesday, 22 April

17.00-17.30 HSA4

PEGRAM, G.; CLOTHIER, A.  
Space-time modelling of rainfall  
in fine intervals: the "string of  
beads" model (Video)

### Hydrological Sciences HS

#### 1. HESS 1-4

HSA1 HS001-HS038  
HSA2 HS039-HS040  
HSA3 HS041-HS044  
HSA4 HS045-HS050

WE  
WE  
WE  
WE

#### 2. HESS 5-9

HSA5 HS051-HS059  
HSA6 HS060-HS075  
HSA8 HA076-HS099  
HSA9 HS100-HS104

TU  
TU  
TH  
TH

#### 3. Water Resources Research

HSB1 HS105-HS112  
HSB2 HS113-HS120

TH  
TH

#### 4. Special Symposia

HSC1.1 HS121-HS142  
HSC1.2 HS143-HS146  
HSC1.4 HS147-HS152

WE  
TH  
TH

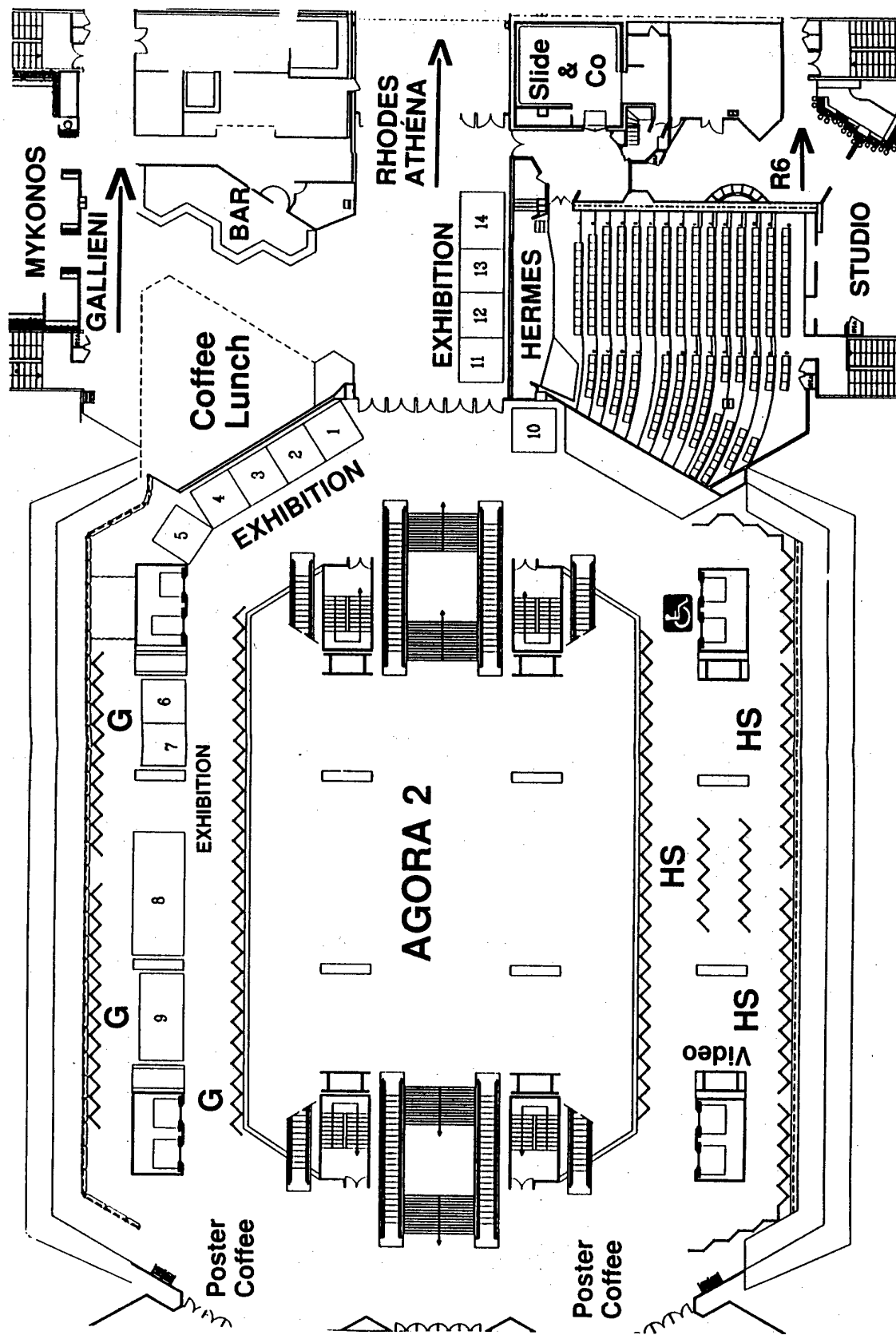
G9 = Session Abbreviation

G002-G004 = Poster Board Numbers

TH = Day of Poster Session

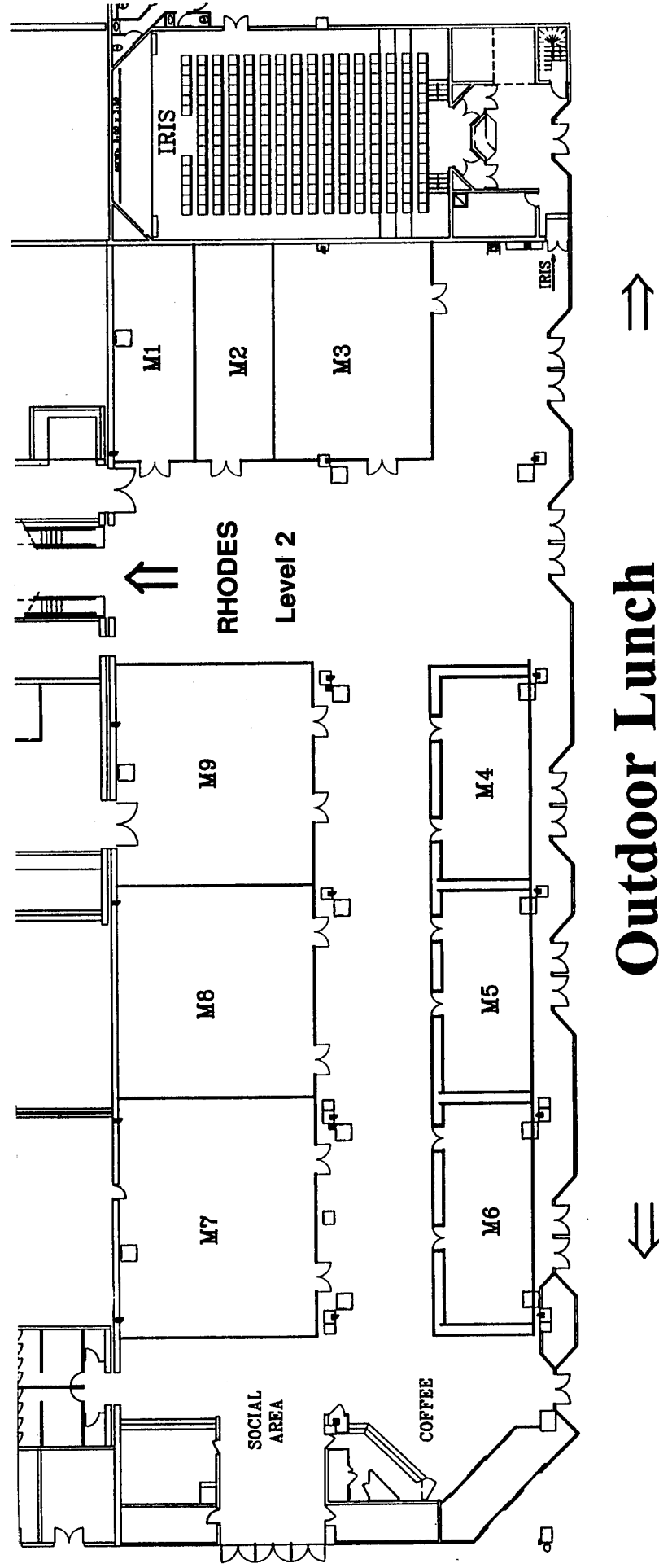
# NICE ACROPOLIS - AGORA 2/Mykonos/Hermes - Level 2

## Exhibition & Posters G & HS



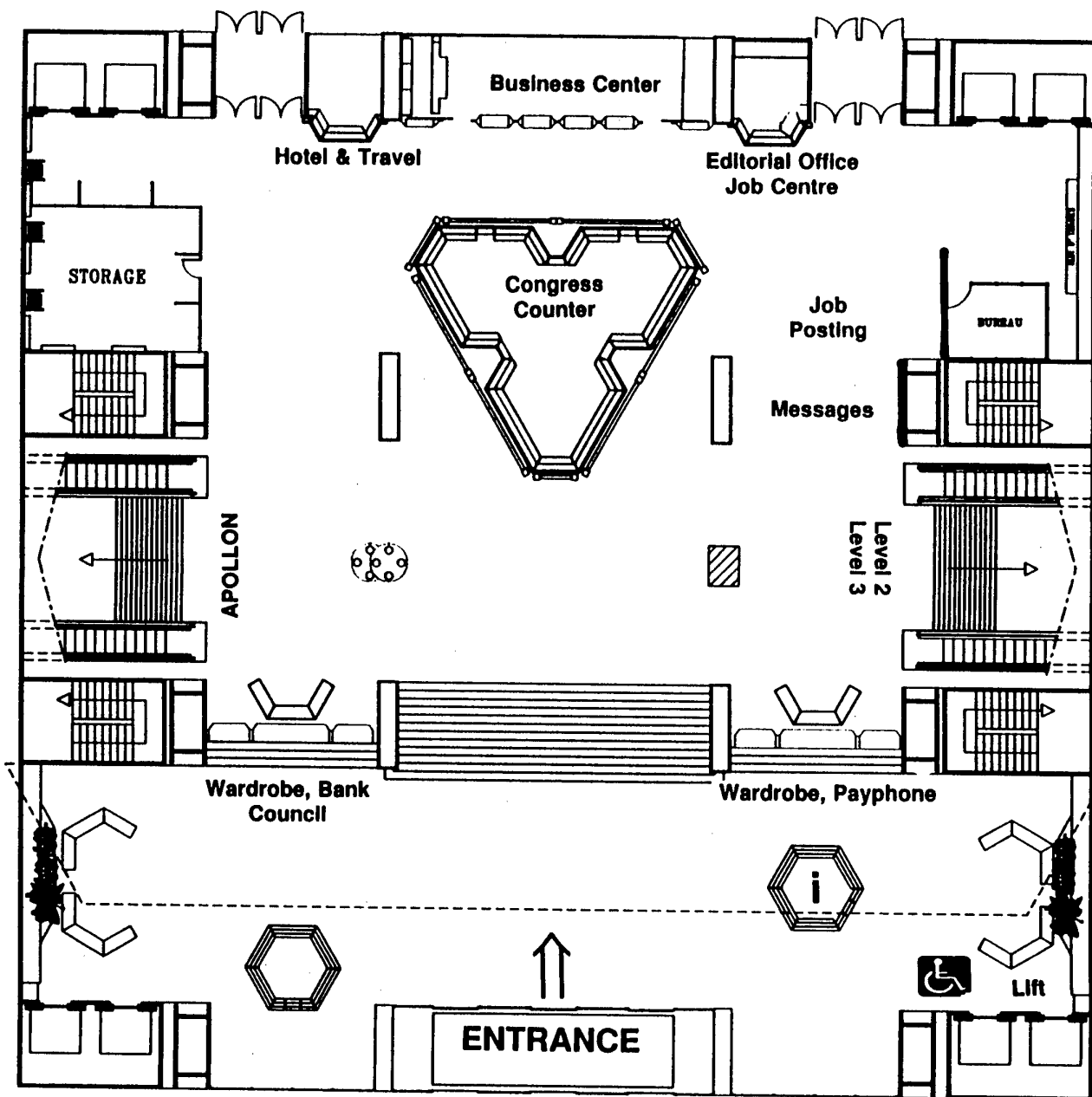
# NICE ACROPOLIS - Méditerranée - Level 0

## Sessions ST, PS & NP



# European Geophysical Society XXIII General Assembly 20-24 April 1998 NICE ACROPOLIS

## Entrance Hall - Agora 1 - Level 0/1



BD. RISSO



# Newsletter European Geophysical Society

Number 66 • March 1998

**XXIII General Assembly, Nice, France, 20-24 April 1998**

General Information 1

EGS Job Centre 10

Conference Publications 15

Physics and Chemistry of the Earth 18

Scientific Programme Overview 41

Overall Schedule for Oral & Poster Sessions 51

Details of Scientific Programme

Society Symposia 63

Solid Earth Geophysics 68

Geodesy 122

Hydrological Sciences 139

Oceans and Atmosphere 161

Solar-Terrestrial Sciences 207

Planetary and Solar System Sciences 236

Nonlinear Processes in Geophysics 252

Natural Hazards 267

Additional Symposia 280

Author Index 281

Forthcoming Meetings 322

Information about the Society 325

Floor Plans 328